

EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME
REGARDING CARDIAC REHABILITATION IN TERMS OF
KNOWLEDGE, ATTITUDE AND PRACTICE AMONG PATIENTS
WITH MYOCARDIAL INFARCTION IN
KMC HOSPITAL, TRICHY.

A DISSERTATION SUBMITTED TO
THE TAMILNADU DR. MGR MEDICAL UNIVERSITY, CHENNAI IN
PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE DEGREE OF
MASTER OF SCIENCE IN NURSING

2008 – 2010

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(2008 – 2010)

Certified Bonafide Project Work

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COLLEGE SEAL

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CHAPTER – I

INTRODUCTION

***“GREAT THOUGHTS REDUCED TO PRACTICE
BECOME GREAT ACTS”***

Hazlitt

BACKGROUND OF THE STUDY:

Health is a state of complete physical, mental and social well being and not merely an absence of disease or infirmity –WHO. When there is complete well being only it is considered to have sound health. In modern medicine and nursing, psychological factors are increasingly regarded as significant in all types of illness.

Andrew S., (1989)

By now, non-communicable disease has become a major epidemic in the world. This is due, in part to a rapid transition in life style leading reduced physical activity, changing diets and increased tobacco use. This trend is present in all categories of the societies –rich and poor in developed and developing countries

Park J.E., (2009)

Heart disease is the leading cause of death in most of the developed and developing countries coronary heart disease was the underlying causes of nearly 26% of death of the patients.

Impairment of heart function due to inadequate blood flow to the heart compared to its needs, caused by obstructive changes in the coronary circulation to the heart.

Brunner and Suddarth (2004)

The factors that are causing myocardial infarction can be considered as modifiable risk factors, which include elevated Serum lipids, hypertension, smoking, physical inactivity, obesity, stress, and behaviour pattern.

Lewis M.S et.al.,(2007)

According to Park J.E., (2007) Coronary artery disease appears a decade earlier with the age incidence in developed countries. The peak period is attained between 51-60 years. Men are more affected than women. .

According to Williams, S.L and Hopper D.P., (1999) in the United States, Myocardial infraction are typically seen in Men over 40 with atherosclerosis development and increased risk factors.

According to Brundtland G.H., (2002) Director General of WHO believes that the time for the global debate to be directed as much towards prevention as to cure. With an increased focus on prevention, the entire public health community stands to gain. Among non-communicable diseases, myocardial infarction ranks first because it is one of the leading causes of morbidity and premature mortality in both developed and developing countries.

According to Lewis., et al., (2006) in the united states, and estimated that prehospital mortality rate among patients with acute Myocardial infraction was approximately 30% to 50% and mortality rate among patients who reach the hospital was approximately 5% Most of these deaths occur within the first three to four days.

Leahey and wright et.al.,(1987) describes the six basic assumption about families which faced with life threatening cardiac illness. The diagnosis of myocardial infarction is a social contrast between the patients, family and health care system, this life threatening diagnosis changes the family life tragically.

The impact of myocardial infarction on patient can be classified in different aspects. The psychological impact in the form of numbness, panic,

unreality and sense of loss. Feeling of depression and anxiety are also commonly experienced. The crisis of the myocardial infarction occurs within a wide variety of marital context nature of relationship, length of marriage, communication rules. Impact of myocardial infarction on family will raise the tension within the family as whole; conflicts can develop between patients and their children. Studies of indicates that their social life can be deleteriously affected by the illness, their social activities. Myocardial infarction also has its effect on vocational and financial distress for the patients some may suffer a reduction in salary as a consequence of their myocardial infarction or surgery.

Jones D.A., (1999)

United States, Each year, approximately 865,000 persons in the United States have a myocardial infarction. In 2007, direct and indirect costs of heart disease were estimated at approximately \$277.1 billion. Cardiac rehabilitation, an essential component of recovery care after a heart attack, focuses on cardiovascular risk reduction, promoting healthy behaviors, reducing death and disability, and promoting an active lifestyle for heart attack survivors. Current guidelines from the American Heart Association (AHA) and the American Association of Cardiovascular and Pulmonary Rehabilitation emphasize the importance of cardiac rehabilitation (2,3), which reduces morbidity and mortality, improves clinical outcomes, enhances psychological

recovery, and decreases the risk for secondary cardiac events . To estimate the prevalence of receipt of outpatient cardiac rehabilitation among heart attack survivors in 21 states* and the District of Columbia (DC), data from the 2005.

American Heart Association (2005)

The world health organization estimates that 60 percent of the world's cardiac patients will be Indian by 2010.

WHO (2004)

Ischemic heart diseases contribute from one-third to one-half of all deaths due to cardiovascular diseases. 3.8 million Men and 3.4 million women in the world die every year from ischemic heart diseases, and in Europe about 2 million. The highest mortality rate from ischemic heart diseases occurs in India, China and Russia.

Ratkov I., (2008)

After Myocardial infarction and many patients lead miserable and unproductive lives, they are frightened to return to work and unnecessarily become cardiac invalids. Recognizing that many patients after list require active intervention if they are to return to normal.

Cardiac rehabilitation is an integral component of the care for patients who have undergone myocardial infarction.

Ryszard K., (2008)

According to the world health organization cardiac rehabilitation includes all actions undertaken to provide optimal physical, mental and social environment for the cardiac patient to let him or her regain maximal functional capacity in the society.

WHO (2008)

Eagan et.al., (1999) stated that the new Millenniums cardiac rehabilitation aims to restore the patient to an optimum level of recovery and where possible to prevent coronary heart disease from progressing. Cardiac Rehabilitation is mainly concerned with moderation of risk factors which if adequately controlled can assist in reducing patients Morbidity and Mortality.

The goal of cardiac rehabilitation is to resume the patient back to the normal activities of daily living and make the Patients become psychologically stable that leads to improve the quality of life of the patient.

Brunner and Suddarth (2004)

The world health organization has defined cardiac rehabilitation as the sum of activity to ensure cardiac patient to best possible physical, mental and social conditions and their own efforts regain as normal as possible, a place in the community and lead an active life. It require a multidisciplinary, multifaceted approach with the aim of improving the short term recovery of patients and encouraging long term life style changes to eliminate risk factors are alcohol, cigarette smoking, elevation of serum cholesterol levels, family history of coronary heart disease.

Education about modifiable risk factors change the patient's attitude and health practice in relation to diet, exercise, smoking, stress and behavior pattern helps to prevent heart disease and preserve life.

NEED FOR THE STUDY:

Myocardial infarction results in enormous burden of increased mortality and morbidity. The experience of a serious illness, particularly if it is a sudden and life threatening event, only for spouse and wider family. These events threaten the patient's stability, security, adaptability beliefs and assumption.

According to WHO report (2001) in India the world wide incidence of Ischemic Heart disease is 1471000/98 Million, Mortality rate of Ischemic Heart

disease is 1169700/98 million. Approximately 1.5 million people in United States have myocardial infraction. Almost 35% that is 5, 00,000 people die each year due to heart attack.

Smitha. S.A. (2001)

The prevalence of cardiovascular disease is reported to be 2-3 times higher in the urban population as compared to the rural population. The risk increases with age and is greater among women than men.

World Health Organization (2006)

In the United States, over one million cause of MI are reported annually. Incidence is greater in men than women.

British heart foundation (2006)

WHO (2000) reported that 1997 it was estimated that mortality from CVS was 30% in china, 10% in India, 20-45% in Eastern Mediterranean, 25% in Latin American, 15% in Africa.

Cardiovascular disease is the leading cause of death in New Zealand, accounting for 40% of all death annually. Coronary heart disease is the largest contributor to this mortality, accounting for about in 4 of all death. The age standardized death rate form coronary heart disease has halved due to primary prevention and improved disease management, with an ageing population the burden of the disease will remain high. Demand for hospital medical admissions including those for coronary heart disease, continue to increase and the average length of hospital stay has been progressively reduced during the past 10-12 years.

The British Heart Foundation (2004)

The WHO recently reported great Britain in the league of deaths as a result of heart disease. According to the WHO'S statistics, Scotland and Northern Ireland had the highest figures for death from coronary heart disease at 298 per 10000, followed by 290 the Irish 282, These statistics illustrate the extend of the problem throughout the world.

WHO (2004)

Margarita et.al., (2009) conducted a study on ten-year Fatal and Non-fatal Myocardial Infarction Incidence in Elderly Populations in Spain. In Spain, more than 85% of coronary heart disease deaths occur in adults older than 65 years. Incidence of fatal and non-fatal myocardial infarction is high in

the Spanish elderly population. Men show higher rates than women, but gender differences diminish with age.

David., et.al.,(1997) conducted study on cardiac rehabilitation services in England and Wales a national survey. England and Wales that admitted patients with cardiac condition. The central components of all programme were education and exercises training but there was a wide range in the quality of service provision. There are wide variations in the resources currently available for the rehabilitation of patients with coronary heart disease. There is a need for clearer direction of these services, in particular to determine service provision. Guidelines are necessary to give a framework for this study new and rapidly expanding service.

Ratkov I. et.al., (2004) conducted study on mortality from heart attack in Belgrade population during the period 1990-2004. Ischemic heart diseases contribute from one-third to one-half of all deaths due to cardiovascular diseases. Three point eight million men and 3.4 million women in the world die every year from ischemic heart diseases, and in Europe about 2 million. The highest mortality rate from ischemic heart diseases occurs in India, China and Russia.

Sarvotham S.G. et.al.,(1968) conducted study on Prevalence of Coronary Heart Disease in an Urban Population in Northern India. The prevalence rates of CHD for men and women were similar to those found in Tecumseh. The prevalence of CHD increased with age, with socio- economic status, with the sedentary nature of occupation, and in hypertensive. Those with CHD were more obese than others, and the prevalence showed a positive correlation with sub scapular skin fold thickness in men. Sixty-two per cent of the men and 88% of the women had clinically silent CHD. No comparable published data on prevalence of CHD in the general population in India is available.

Community based epidemiological studies indicate a prevalence rate of CHD at 65-97 per 1000 adult in the urban population and 10-27 per 1000 in rural population. In India the prevalence of disease expected to double by the year 2015 in comparison to that of 1985. The pattern of CHD in India has been reported that Males are affected more than females. In Chandigarh (urban population) the prevalence, was found to be 65.4/1000 in males in 47.8/1000 in females. In Haryana (Rural) the prevalence was 22.8 and 17.3 per 1000 males and females respectively.

Muhapathra S. et.al.,(1998)

Gupta R. (2008) et.al., conducted a study on recent trends in coronary heart disease epidemiology in India. Coronary heart disease (CHD) is epidemic in India and one of the major causes of disease-burden and deaths. Mortality data from the Registrar General of India shows that cardiovascular diseases are a major cause of death in India now. Studies to determine the precise causes of death in urban Chennai and rural areas of Andhra Pradesh have revealed that cardiovascular diseases cause about 40% of the deaths in urban areas and 30% in rural areas. Analysis of cross-sectional CHD epidemiological studies performed over the past 50 years reveals that this condition is increasing in both urban and rural areas. The adult prevalence has increased in urban areas from about 2% in 1960 to 6.5% in 1970, 7.0% in 1980, 9.7% in 1990 and 10.5% in 2000; while in rural areas, it increased from 2% in 1970, to 2.5% in 1980, 4% in 1990, and 4.5% in 2000.

WHO is more active from in observance of World Heart Day at 2000(the last Sunday in September every year).With concept of increased awareness, prevention and the seeking of medical help. In government of India (Cardiology society of India (CSI) and All India heart Heart foundation (AIHF) has developed specific legislation for the welfare of the persons with heart disease like legislation against the use of tobacco and alcohol and for labeling of processed food to declare their fat and sodium content.

Padmavathi S., (2002)

In government of Tamilnadu has implemented “varumun kappom” were patient has screened for certain underlying causes like hypertension, symptoms of cardiac diseases and immediate attention is given by immediate referral to head quarters hospital in each district.

“Kalaigalar Kaappittu Thittam” was established in year of 2009. For the benefit of the low socio economic group who are unable to afford medical expenses in acute life threatening condition.

Cardiac rehabilitation has an important role in assuring the application of the available knowledge to avoid cardiac complication and progression of disease and to improve cardio respiratory fitness and survival. Cardiac rehabilitation should therefore be an integral part of cardio logical Management after a cardiac event.

Lewis M.S et.al., (2007)

Gohike H., (1998) conducted a study on cardiac rehabilitation found that cardiac rehabilitation programme should educate the patient and emphasized the need to apply the appropriate medical regimen in addition to the non-pharmacological treatment modalities of cardiac rehabilitation to achieve maximal benefit.

The survey investigated a new area of clinical practice by nurses in primary care. Practice nurses were generally enthusiastic about follow up care for myocardial infarction patients and thought that they played a key role, particularly if they were already providing it.

Lucy Wright. et.al.,(1998)

Jenny. et.al., (2006) conducted a study on listening to patients choice in cardiac rehabilitation. To explore patients experience of MI and identify the factors which influence the choice patients make given the option of hospital or home based CR after MI. The study findings shown that understanding the factors that influence patients choice may help professional guide them to the most appropriate CR method and hence improve uptake.

Nolan M., (1998), studied cardiac rehabilitation following myocardial infarction, consider some of the deficits in current practice and suggests ways in which nurse can contribute more fully to care in this area. The need for better training and the necessity to develop skills in psychological care are highlighted.

Cardiac rehabilitation (rehab) is a medically supervised program that helps improve the health and well being of people who have heart problems.

Cardiol J., (2008)

Rehabilitation programs include exercise training, education on heart healthy living and help return to an active life, understanding the factors that influence patient's choice, may help professionals guide them to the most appropriate cardiac rehabilitation method and improve uptake.

The investigator while working in cardiology ward observed that clients with myocardial infarction had lack of knowledge regarding exercise, diet, medication, warning sign, follow-up care. Investigator feels that it will be better to provide a planned cardiac rehabilitation programme during hospitalization which will improve the coping ability of the client to adopt better in later period of treatment.

STATEMENT OF THE PROBLEM

A study to assess the effectiveness of structured teaching programme regarding cardiac rehabilitation in terms of knowledge, attitude and practice among patients with myocardial infarction at KMC hospital, Trichy.

OBJECTIVES:

1. To assess the pretest level of knowledge, attitude and practice regarding cardiac rehabilitation among patients with myocardial infarction.
2. To assess the posttest level of knowledge, attitude and practice regarding cardiac rehabilitation among patients with myocardial infarction.
3. To compare the pretest and posttest level of knowledge, attitude and practice regarding cardiac rehabilitation among patients with myocardial infarction.
4. To correlate the knowledge and practice regarding cardiac rehabilitation among patients with myocardial infarction.
5. To find out the association between posttest levels of knowledge scores regarding cardiac rehabilitation among patients with myocardial infarction with their selected demographic variables.
6. To find out the association between posttest practice scores regarding cardiac rehabilitation among patients with myocardial infarction with their selected demographic variables.

OPERATIONAL DEFINITION:**EFFECTIVENESS:**

It means producing an intended result. In this study it refers to determine the extent to which teaching programme has brought about the intended results and it is measured in terms of improvement in knowledge, attitude and practice, which is measured in terms of statistical measurements.

KNOWLEDGE:

The information gained through education. It refers to the verbal response of the patient level of understanding regarding cardiac rehabilitation which is measured by structured questionnaire and its scores.

ATTITUDE:

It means a way of thinking or feeling about someone or something. In this study it refers to the opinion towards cardiac rehabilitation among patients with MI which is measured by five point likert scale and its scores.

PRACTICE:

The usual way of doing something. In this study knowledge on practice refers to verbal response to cardiac rehabilitation activities among patients with myocardial infarction which is measured by observational check list and its scores.

STRUCTURED TEACHING PROGRAMME:

It is a planned series of information to a group of people. In this study it refers to an organized teaching which aims to impart the knowledge, attitude and practice regarding cardiac rehabilitation among patients with myocardial infarction which includes disease condition, cardiac rehabilitation phases, progressive physical activities, walking programme, medication, exercises, diet, resume normal activity, follow-up. It was given by using compact disc with laptop for a period of 45-50 minutes.

CARDIAC REHABILITATION:

According to Scottish it refers to the restoration of a person to an optimal state of function. Cardiac rehabilitation is the process by which patients with cardiac disease, in partnership with a multidisciplinary team of health professionals are encouraged and supported to achieve and maintain optimal physical and psychological health.

MYOCARDIAL INFARCTION:

Myocardial infarction is the sudden occlusion of a coronary artery and the abrupt cessation of blood and oxygen flow to the heart muscles.

Lewis et.al.,(2007)

PATIENTS:

A person who is ill or undergoing treatment for a health care problem. In this study it refers to the person diagnosed to have myocardial infarction who is admitted in hospital.

HYPOTHESES:

- H1- The mean posttest knowledge scores is significantly higher than the mean pretest knowledge scores regarding cardiac rehabilitation among patients with myocardial infarction.
- H2- The mean posttest attitude scores is significantly higher than the mean pretest attitude scores regarding cardiac rehabilitation among patients with myocardial infarction.
- H3 - The mean posttest practice scores is significantly higher than the mean pretest practice scores regarding cardiac rehabilitation among patients with myocardial infarction.
- H4 - There will be significant relationship between posttest knowledge and practice scores regarding cardiac rehabilitation among patients with myocardial infarction.
- H5- There will be a significant association between the posttest knowledge scores regarding cardiac rehabilitation among patients with myocardial infarction with their selected demographic variables.

H6- There will be a significant association between the posttest practice scores regarding cardiac rehabilitation among patients with myocardial infarction with their selected demographic variables.

ASSUMPTIONS:

- Myocardial infarction patients have some knowledge on cardiac rehabilitation.
- Knowledge influences the attitude and practice regarding cardiac rehabilitation.
- Nurses have an important role in educating the Myocardial infarction patients about cardiac rehabilitation.
- Structured teaching programme will enhance the knowledge, attitude and practice regarding cardiac rehabilitation among patients with myocardial infarction.

DELIMITATION:

The study is delimited to

- ◆ The data collection period is only 4 weeks.
- ◆ Study is limited to only 60 samples.

PROJECTED OUTCOME:

The structured teaching programme regarding cardiac rehabilitation will improve the knowledge, attitude and practice which will enable the patient to comply with the treatment regimen and improve their quality of life of patients with myocardial infarction.

II -CONCEPTUAL FRAMEWORK

Conceptual framework helps to express abstract ideas in a more reality understandable or precise form than the original conceptualization. This conceptual framework for this study was directed from **Wiedenbach's helping art of clinical nursing theory (1969)**.

According to Ernestine Wiedenbach(1969), nursing is nurturing and caring for someone in a motherly fashion. Nursing is a helping service. That is rendered fashion with compassion, skill and understanding to those in need of care, counsel and confidence in the area of health. Conceptual used for this study based on the concept of helping the patient with myocardial infarction to improve skills to cope with their disease condition and also to gain knowledge and develop desirable attitude towards cardiac rehabilitation. According to this theory nursing practice consists of three aspects which includes.

Step I:Identifying the need for help.

Step II:Ministering the needed help.

Step III:Validating the needed for help .

Central purpose:

According to the theorist the central purpose of the nurses' action is to define the quality of health desires to affect or sustain patients specifies what recognition the central purpose as essential to the particular discipline.

In this study the central purposes is the patients with myocardial infarction to gain knowledge, practice and develop positive attitude towards cardiac rehabilitation.

STEP I- IDENTIFYING THE NEED FOR HELP:

Widen Bach's believed that every individual need as a normal part of living in comfortably or capably on situation. Identification involves individualization of the patient, his experience and recognition of the patient's perception.

In this study idea of patient needs including general information which comprises the age, sex, marital status, education, occupation, religion, economic status, area of residence and number of myocardial infarction attack. Pre assessment of knowledge, attitude and practice regarding cardiac rehabilitation after myocardial infarction.

STEP II- MINISTERING THE NEEDED HELP TO MYOCARDIAL INFARCTION PATIENTS.

Ministering is providing the needed help. It requires the identification of the need for help. The selection of a helping measures appropriate to that need and the acceptability of the help to the patient.

According to the theorist ministering the needed help has two components.

- (a). Prescription
- (b) . Realities

(a).Prescription:

According to the theorist a prescription is directive to directive to activity which is specifies both the nature of the action that will most likely lead to fulfillment of the nurse's central purpose and the thinking process that determines it.

In this study prescription is plan of care to achieve the purpose which includes development, validation of tool and followed by administration of structured teaching programme regarding cardiac rehabilitation which includes phases, progressive physical activity, exercises, walking programme, safety measures to take medication, diet and resume normal activity among

patients with myocardial infarction by using laptop with compact disc 45 minutes.

(b). Realities:

According to the theorist, the realities of the situation in which the nurse is to provide nursing care. Realities consists of all factors- physical, physiological, psychological, emotional and spiritual that are at play in a situation in which nursing actions occur at any given moment. Realities are the immediate solution that influence the fulfillment of the central purpose nurses should consider the realities of the situation in which investigator is to providing care. Wiedenbach defines five realities as: the agent, the recipient, the goal, the means and the framework.

(i)Agent:

According to the theorist the agent who is professional nurse or her delegate characterized by the personal attribute capacities, capabilities and most importantly commitment and competencies in nursing. In this study the investigator is the agent.

(ii)Recipient:

According to the theorist the recipient mean the patient who is characterized by the personal attributes problem, capabilities and ability to cope with the concerns problems being experienced. In this study patients with myocardial infarction are the recipient.

(iii)Goal:

According to the theorist the goal is the desired outcome the nurse wishes to achieve. In this study it refers to the myocardial infarction patients to gain knowledge develop positive attitude towards cardiac rehabilitation and improve their practice regarding cardiac rehabilitation.

(iv)Means:

According to the theorist, the means comprise the activities and devices through which the practitioner is enabled to attain goal. The means includes skill, techniques, procedure and devices that may be used to facilitate nursing practice. In this study it refers to structured teaching programme regarding cardiac rehabilitation among patient with myocardial infarction by using compact disc and laptop.

(v)Framework:

According to the theorist, the framework is composed of all the extraneous factors and facilities in the situation that affect the nurses' ability to obtain the desired result. In this study it refers to the hospital setup cardiology ward in KMC hospital, Trichy.

STEP I II-VALIDATING THE NEEDED HELP :

According to the theorist the component is validation. After the help has been ministered the nurse validates that the actions were indeed helpful. Evidence must come from the patient that the purpose of the nursing action has fulfilled.

In this study the validated need for help was met by means of posttest assessment of knowledge, attitude and practice regarding cardiac rehabilitation among patients with myocardial infarction after structured teaching programme. Negative out come on cardiac rehabilitation patients who had inadequate knowledge, practice and unfavorable attitude that needs the ministering of needed help again.

CENTRAL PURPOSE

To gain adequate knowledge, favourable attitude and adequate practice on cardiac rehabilitation among patients with myocardial infarction.

Step I

Identifying the need for help

Demographic variables:

Age, sex, marital status, education, occupation, religion, family monthly income, area of residence, number of MI attack.

Pretest:

Selection of samples based on criteria for sample selection

Assessment of knowledge, attitude and practice regarding cardiac rehabilitation among patients with myocardial infarction.

Step II: Ministering the needed

Prescription

Development and validation of structured teaching programme regarding cardiac rehabilitation.

- phases
- Progressive physical activity.
- Exercises
- Walking programme.
- Safety measures to take Medication.
- Diet and resume normal activity.
- Communication
- Feedback

Realities

1. Agent : investigator
2. Recipient: patients with myocardial infarction.
3. Goal : Central purpose
4. Means: Implementation of structured teaching programme using CD and laptop
5. Facilities: Cardiology ward in KMC Hospital, Trichy.

Step III Validating the need for help

Posttest:

Assessment of knowledge, attitude and practice regarding cardiac rehabilitation on seventh day.

Inadequate knowledge, practice and Unfavorable attitude.

Moderately adequate knowledge, practice and moderately favorable attitude,

Adequate knowledge, practice and favorable attitude, practice

Feedback

FIG.I. MODIFIED WIEDENBACK'S HELPING ART OF CLINICAL NURSING THEORY-1969

CHAPTER – II

REVIEW OF LITERATURE

The task of reviewing research literature involves the identification, selection, critical analysis and written description of consisting information on the topic of interest. In this chapter an attempt is made to bring out the available literature, which helps in projecting the widened perspectives of the study.

Part I:

Overview related to myocardial infarction and cardiac rehabilitation.

Part II :

- A. Studies related to myocardial infarction.
- B. Studies related to cardiac rehabilitation.
- C. Studies related to effectiveness of structured teaching programme on cardiac rehabilitation.

PART I:

OVERVIEW RELATED TO MYOCARDIAL INFARCTION AND CARDIAC REHABILITATION

DEFINITION:

Myocardial infarction is a life threatening condition characterized by the formation of localized necrotic areas within the myocardium.

Black M.Joyce (2005)

CAUSES:

- ❖ Coronary emboli – lesions of heart valves or thrombus in the left chambers of the heart.
- ❖ Thrombotic coronary artery disease causes the blood to thicken and forms blood clots.
- ❖ Coronary vasospasm- cocaine or amphetamine abuse.
- ❖ Trauma – damage to coronary arteries can occur when stabbed or if exposed to radiation.
- ❖ Carbon monoxide poisoning – increase the heart muscles demand of oxygen.

Wilma J. Phipps et.al., (1996)

RISK FACTORS:

Non modifiable risk factors:

- ❖ Advancing age ,gender , ethnicity
- ❖ Male sex
- ❖ Family history of early coronary artery disease

Modifiable risk factors:

- ❖ Diabetes mellitus
- ❖ Smoking, tobacco use
- ❖ Elevated serum lipid
- ❖ High blood pressure
- ❖ Obesity
- ❖ Physical activity
- ❖ Dietary factors

Joyce M. Black(2005)

CLINICAL MANIFESTATION:

- Chest pain occurs suddenly and continues
- Pain may radiate to the shoulders and down the arms usually in the left arm .
- Pain may radiate to the jaw and neck
- It accompanied by shortness of breath

- Pallor, diaphoresis or lightheadedness
- Nausea and vomiting

Brunner and Suddarth(2004)

DIAGNOSTIC EVALUATION:

- ❖ Patient history and physical examination
- ❖ Electrocardiogram
- ❖ Echocardiogram
- ❖ Serum enzymes and iso-enzymes
 - Creatinekinase – CK-MM(skeletal muscle)
 - CK-MB (Heart muscle)
 - CK-BB(Brain tissues)

Joyce M.Black(2005)

MEDICAL MANAGEMENT:

- ❖ Vasodilators –nitroglycerine
- ❖ Anticoagulants – Heparin
- ❖ Thrombolytics - Streptokinase
- ❖ Oxygen administration
- ❖ Analgesic – morphine sulfate

Lewis et.al.,(2007)

SURGICAL MANAGEMENT:

- ❖ Coronary artery bypass surgery (CABG)
- ❖ Minimally invasive direct coronary artery bypass
- ❖ Transmyocardial laser revascularization

Wilma.J.phipps,et.al.,(1996)

NURSING MANAGEMENT:

- ❖ Relieving chest pain
- ❖ Administer oxygen
- ❖ Assess vital signs frequently
- ❖ Provide physical rest
- ❖ Improving respiratory function
- ❖ Promoting adequate tissues perfusion
- ❖ Reducing anxiety

Lewis et.al.,(2007)

COMPLICATIONS:

- ❖ Dysrhythmias
- ❖ Heart failure
- ❖ Cardiogenic shock
- ❖ Pericarditis
- ❖ Dressler syndrome

David Son. et.al., (1999)

CARDIAC REHABILITATION

DEFINITION:

Cardiac rehabilitation is the restoration of a person to an optimal state of function. The process of helping the patient adjust to a disability by teaching integration of all resources and concentrating more on existing abilities than on permanent disabilities

Lewis M.S. et.al(2007)

GOALS:

- ❖ Improve and extend the person's quality of life
- ❖ To return the patient as rapidly as possible to a normal lifestyle
- ❖ Educating patient and family members
- ❖ Initiating psychosocial and vocational counseling

Brunner and Suddarth(2004)

PHASES OF CARDIAC REHABILITATION:

Phase -1(Acute illness):

Begins as soon as the acute episode of illness occurs, usually while the patient is still in the coronary care unit.

Phases – 2 (less acute illness):

Occurs during the remainder of the hospitalization the nurse can assist the patient toward realizing the goal of independence, even while on strict bed rest.

Phases – 3 (Period of convalescence) (3 to 8 weeks):

Phase 3 begins with the patients discharge to home and continuous throughout the convalescent period.

Phases - 4 (Maintenance phase):

Focus on long term conditioning and on maintaining cardiovascular stability. The patient is usually very self directed during this phases and does not require a accomplishments of the previous phase.

Brunner and Suddarth(2004)

PROGRESSIVE PHYSICAL ACTIVITY:

A progressive physical activity programme is initiated only when the patient's vital signs have stabilized and as assessed by the physician.

- ❖ Progressive physical activity should be balanced with a period of rest in between the activity.
- ❖ The patient should be under expert supervision when over a new activity is initiated.

- ❖ All patients in their acute illness should perform their daily activities under the supervision.
- ❖ Patient should be adequately instructed when to report, how to call for help, if needed.
- ❖ Instruct the patient to call for help and to take rest by lying down whenever he feels faint or his heart beats too fast or too slow.
- ❖ Patient should wear comfortable dress.

Avoid taking baths and showers immediately after the activity.

Sister Nancy.M.S.,(2003)

TYPES OF EXERCISE:

Three types of muscular contraction exercises can apply safely to cardiac patients.

- ❖ Isometric(static)
- ❖ Isotonic (dynamic)
- ❖ Resistive (a combination of isometric and isotonic).

Retrieved from Internet

BENEFITS OF EXERCISES:

- ❖ Aids in building muscle strength mean while burning excess fat.
- ❖ Slow muscle erosion and enhances the tone and shape of muscle.
- ❖ Help to improve bone density.
- ❖ To improve digestion.

Verril R., et.al., (2003)

AEROBIC EXERCISES:

Brisk physical activity that requires the heart and lungs to work harder to meet the body's increased oxygen demand. Aerobic exercise promotes the circulation of oxygen through the blood.

Charles .Ket.al (2003)

FLEXIBILITY EXERCISES:

Stretching relaxes the mind and tunes up. An increase of flexibility such as improvement in over all balance, stability and mobility.

WARM UP AND COOL DOWN:

Mild stretching for 3 to 5 minute before the physical activity and 5 minutes after the activity is important. Activity should not be started or stopped abruptly. This will help gradually prepare for and recover from exercises and avoid pushing heart down too hard.

WALKING PROGRAMME:

Walking to be started after warm up exercise, and continue for 10 minutes then walk slowly for five minutes.

(e.g) Slow walking, Stretching legs and hands rapidly

OTHER ACTIVITIES:

- Counting pulse rate
- Safety measures to take medication
- Dietary pattern

Total daily calories:

Total fat – 25% – 35%

Carbohydrate – 50% - 60%

Protein - 15%

Cholesterol - < 200mg

Sodium - <240 mg

Dietary fiber - 20 – 30 gm

Indrani.T.K (2003)

○ **Foods to be avoided**

1. Cholesterol
2. saturated fat
3. sodium rich diet
4. Potassium rich diet

Rekashsharma.J(1999)

○ **Foods to be take freely**

1. Fiber rich diet
2. Omega fatty acids
3. Protein rich diet
4. Fruits and vegetables

○ Daily weight checking

○ Prevention of emotional stress

○ Resume normal activity

○ Follow up care

PART - II

STUDIES RELATED TO MYOCARDIAL INFARCTION:

Joshi P, et.al.,(2007) conducted study on to evaluate the association of risk factors for AMI in native South Asians, especially at younger ages, compared with individuals from other countries. The study revealed that the earlier age of AMI in South Asians can be largely explained by higher risk factor levels at younger ages.

Pais P.S., (2006) et.al., conducted study on Early intervention and prevention of myocardial infarction. Primary prevention involves the avoidance of disease in high-risk subjects free of disease, whereas the purpose of secondary prevention is to avoid recurrence of myocardial infarction. It requires promoting a healthier life style in the population as a whole by encouraging people to seek alternatives and making them available.

Gupta G., (2004) et.al., conducted a prospective case-control study to determine the risk factors for acute myocardial infarction in a rural population of central India. Finding of the study is reduction in blood glucose levels and obesity may be important in controlling the burden of coronary artery disease in rural Indians.

Chowta K.N., et.al., (1999) conducted a study on modes of presentation of acute myocardial infarction in India. The result shows out of 60 patients, experiencing MI without chest pain tended to be older (mean age 61 vs 58 yr) and were women (35% vs 12.5%); 80% of patients presented with chest pain followed by dyspnea (28.3%) and vomiting (13.3%).

Amit Dang. et.al.,(2008) conducted a study on differences in risk factors and mortality, In Young and Old Individuals with Acute Myocardial Infarction in Goa. A total of 355 patients admitted to the Department of Medicine with AMI, were analysed. Characteristics of the patients who were \leq 45 years of age and were considered young were compared with those above 45 years. The study shows that 22.25% (79) of those admitted with AMI were \leq 45 years. 11.39% (9) of the AMI in young individuals, occurred in females, compared to 27.69% (77) in the old AMI patients. 21.51% (17) of the young AMIs presented with cardiac failure (CF) compared to 41.30% (114) in the older age group. Risk factors like alcohol and smoking were more commonly found in the young AMIs, whereas diabetes mellitus (DM), hypertension (HT) and past history of ischaemic Heart Disease (IHD) and AMI were higher in the older patients. The study revealed that preventive measures for AMIs in the younger age group it involve measures to prevent smoking and alcohol

consumption. Preventive measures in the elderly patients should emphasis on control of DM and HT.

Muhammad. et.al., (2006) conducted a cross-sectional study was conducted at the National Institute of Cardiovascular Disease, a major tertiary care hospital in Karachi Pakistan. Patients admitted with their first AMI were eligible to participate. Standard questionnaire was used to interview 720 subjects. Knowledge of four modifiable risk factors of heart disease: fatty food consumption, smoking, obesity and exercise were assessed .Findings of the study highlight the lack of good level of knowledge on modifiable risk factors for heart disease among subjects admitted with AMI in Pakistan. There is urgent need for aggressive and targeted educational strategies in the Pakistani population.

Carlsson R. et.al.,(2001)conducted a study on influence of coronary nursing management follow up on lifestyle after acute myocardial infarction. The study revealed that this secondary prevention programme based on a nurse rehabilitator was successful in improving food habits in patients with acute myocardial infarction. Initiating the smoking cessation programme during the hospital stay followed by repeated counseling during follow up might have improved the results.

Robert A. Phillips (2008) conducted a study on another Boost for Cardiac Rehabilitation, published in this issue of the Archives included patients with coronary artery disease (CAD) in order to study the factors associated with patient knowledge about the condition. The identified factors can be categorized as non modifiable and modifiable. In the latter category, female sex, younger age, and higher education were associated with more knowledge about CAD.

Sathia G.N. (1999) discussed on pain management of suspected heart attack said that aspirin was still the best seller. According to 1996 studies indicate that one half of a regular strength aspirin tablet taken at the onset of suspected heart attack and continued for 30 days reduces the risk of death by 23 percent.

Denice Mann (1999) has stated that vitamin c may help to prevent heart attack. Vitamin c may help improve blood flow and possibly prevent heart attack. In the new study of 26 heart disease patients, blood vessels widened in those who were given 2 gms of vitamin c, while there was no improvement in people who took a placebo.

Bradley F. et.al., (1997) conducted a study on preventive care for patients following myocardial infarction. Assess general practice care for patients

following a myocardial infarction (MI). The main outcome measures were the provision of appropriate preventive care, including cardiac rehabilitation, drug therapy, and lifestyle advice for modifiable risk factors. The study concluded that Preventive care in patients with proven ischemic heart disease in general practice remains haphazard, even among doctors enthusiastic to participate in research and to audit their quality of care. As general practitioners we should ensure that we are providing high quality preventive care to patients with clinical disease before we focus on the even more demanding task of primary prevention.

Sharon .K, et.al.,(2006) conducted study on Anxiety and Self-Care Following Myocardial Infarction . To examine the relationship between trait and state anxiety experienced during hospitalization for an acute myocardial infarction and self-care behaviors several weeks after the infarction. The study findings revealed low correlations between trait anxiety and exercise performance, medication administration, stress management, and smoking cessation behavior, and between state anxiety and smoking behavior.

STUDIES RELATED CARDIAC REHABILITATION:

Clark .S., et.al., (1999) conducted a Study on Integration of Nutrition Education into a Multidisciplinary Cardiac Rehabilitation Program. The multidisciplinary Cardiac Rehabilitation Program (CRP) at Wilford Hall Medical Center was redesigned to improve both efficiency and effectiveness of services offered to patients following recovery from either myocardial infarction or cardiac bypass surgery. The findings revealed that services were redesigned to provide a “one stop shop” approach for minimizing inconvenience to patients and for achieving the CRP's goals of increasing functional cardiac capacity, improving quality of life, and reducing risk of future cardiac events.

Wingham.J.et.al., (2006) found that the benefit of cardiac rehabilitation (CR) after myocardial infarction (MI) is increasingly recognized and is recommended in national guidelines. To explore patients' experience of MI and to identify the factors which influence the choice patients make given the option of hospital or home-based CR after MI. The study revealed that seventeen participants were interviewed before their rehabilitation programme. Ten expressed a preference for home-based and seven for hospital-based rehabilitation. Common to both groups as shock and disbelief, which led to a loss of confidence. They expressed a strong desire to make

lifestyle changes and looked for specific advice, guidance and support from knowledgeable experts. The hospital-based groups had an emphasis on supervision during exercise, needed the camaraderie of a group, were willing to make travel arrangements and believed they lacked self-discipline. The home-based group believed that their CR should fit in with their lives rather than their lives fitting in with the rehabilitation programme and were self-disciplined. They disliked groups and expressed practical concerns. Understanding the factors that influence patient's choices may help professionals guide them to the most appropriate CR method and hence improve uptake.

Alika.P., et.al (2006), conducted study on knowledge of patients on cardiac rehabilitation measures. The result shows that majority of the participants 63.33% has inadequate knowledge, 33.66% of participants had moderately adequate knowledge. The participants had obtained a higher posttest mean score $M=18.0$, $SD=2.9$, in comparison with the pretest mean score $M=11.4$, $SD=2.9$, and it was significant at $P < 0.001$ level. Researcher concluded that the effect of myocardial infarction is very critical, cardiac rehabilitation measures can help nurses to develop strategies that would help the participants cope effectively.

Egan.F , (2009) conducted study on Cardiac rehabilitation into the new millennium among coronary heart disease in in the British Isles These include smoking, hypertension, diabetes, elevated serum cholesterol, hypertension and obesity. It revealed that patients' knowledge level increased following the implementation of a structured teaching programme. The study concluded that in-hospital education is essential for all cardiac patients. This needs to be structured, systematic and easily adaptable to suit individual requirements.

Barber.K.,(2009), conducted a study on Cardiac rehabilitation for community-based patients with myocardial infarction Factors predicting discharge recommendation and participation. This suggests that encouragement plays a strong role in attendance for rehabilitation. The same strong encouragement should be given to the broader range of MI patients who stand to benefit from cardiac rehabilitation.

John.L. Campbell et.al (2004) British Medical Journal conducted study on Recent developments in Secondary Prevention and Cardiac Rehabilitation after Acute Myocardial Infarction. Acute myocardial infarction remains a common cause of death worldwide. Despite decreases in mortality from coronary heart disease in most developed countries, mortality is increasing in most eastern European countries and developing countries.¹ In the United

Kingdom 1.2 million people are estimated to have survived heart attacks, yet few survivors are offered comprehensive cardiac rehabilitation. Effective implementation of secondary prevention is a great challenge, and lack of implementation has been described as a collective failure of medical practice, as clear evidence shows that several interventions could reduce the risk of recurrent disease and death. Primary care's challenge is to make this happen. Two recent initiatives will change the face of secondary prevention in British primary care. The national service framework for coronary heart disease advocates the use of disease registers in primary care to provide long term follow up of patients with coronary heart disease and sets standards and milestones for secondary prevention.

Brandi J.,et.al.,(2004) conducted a study on Cardiac rehabilitation after myocardial infarction in the community. The study was to examine participation in cardiac rehabilitation after myocardial infarction (MI) by age and gender and the association of participation with survival. Lesser participation in cardiac rehabilitation has been reported for women and the elderly. The study revealed that approximately half of the patients participated in cardiac rehabilitation after MI. Participation did not increase over time. Women and elderly persons were less likely to participate, independently of other characteristics. Participation in rehabilitation was

independently associated with decreased mortality and recurrent MI, and its protective effect was stronger in more recent years.

Marie Johnston,et.al.,(1999) conducted a study on Impact on Patients and Partners of Inpatient and Extended Cardiac Counseling and Rehabilitation in Scotland. This study evaluated the effectiveness of cardiac counseling and rehabilitation programs led by a nurse counselor, compared with normal care on outcomes for myocardial infarction (MI) patients and their partners. The study revealed that this inpatient cardiac counseling and rehabilitation program resulted in significant and enduring benefits of clinical value.

Cooper A.F., et.al.,(2007), conducted a study on Assessing Patients' Beliefs about Cardiac Rehabilitation as a basis for Predicting Attendance after Acute Myocardial Infarction in London, UK. A prospective design was used and 130 patients with AMI. The results show that the beliefs about cardiac rehabilitation can be quantified and differ between attenders and non-attenders of cardiac rehabilitation.

Carl J.et.al., (2005), conducted a study on cardiac rehabilitation preventive cardiology in the elderly, coronary heart diseases continue to be a major threat to disease CHD to health in older Americans, who account for more than three fourths of total CHD death and more than half of all acute

myocardial infarction in united states. When older patients have an acute CHD event, they often require longer hospitalizations and develop more reconditioning, and they have considerably higher morbidity and mortality. Primary and secondary preventive efforts directed at elderly need further emphasis.

Diane L., et.al.,(2007) to determine the effect of community-based collaborative peer advisor/advanced practice nurse. There were significantly more participants in cardiac rehabilitation programs after 3 months in the treatment group, and this increase was seen up to 1 year after MI and CABG. The evidence from this study suggests that a community-based collaborative peer advisor/advanced practice nurse intervention can play a role in promoting active participation in cardiac rehabilitation programs and fewer rehospitalizations in unpartnered older adults after MI and CABG.

Shelly Matta (1995) states that patient education programme for cardiac patient is a essential part of quality medical care today and emphasizes the following major areas as cessation of smoking, managing high blood pressure, diet modification and warning sign impending heart attack to reduce the risk of coronary vascular disease.

M. R. Melville, et.al., (1999) conducted a study on socially deprived patients are less likely to attend but Patients Ineligible for Thrombolysis are less Likely to be Invited in Nottingham. It is identify factors associated with the uptake of cardiac rehabilitation following acute myocardial infarction. Retrospective analysis using multivariate logistic regression modeling. They concluded that those invited to attend a cardiac rehabilitation programme are likely to be in a good prognosis group, comprising those who are young and have received thrombolysis. Those at greatest risk, particularly patients from socially deprived areas, seem to be missing out on the potential benefits of cardiac rehabilitation. High risk patients should be specifically targeted to ensure that they are invited to, and encouraged to, attend a program who admitted with acute myocardial infarction.

Thomas KS Wong, et.al.,(2006) examined the effect of a cardiac rehabilitation programme on health behaviours and physiological risk parameters in patients with coronary heart disease in Chengdu, China. A randomized controlled trial was conducted. Coronary heart disease patients ($n = 167$) who met the sampling criteria in two tertiary medical centers in Chengdu, south-west China, were randomly assigned to either an intervention group (the cardiac rehabilitation programme) or control group (the routine care). The change of health behaviours (walking performance,

step II diet adherence, medication adherence, smoking cessation) and physiological risk parameters (serum lipids, blood pressure, body weight) were assessed to evaluate the programme effect. The study shown that patients in the intervention group demonstrated a significantly better performance in walking, step II diet adherence, medication adherence; a significantly greater reduction in serum lipids including triglyceride, total cholesterol, low-density lipoprotein; and significantly better control of systolic and diastolic blood pressure at three months. The majority of these positive impacts were maintained at six months. The study revealed that a cardiac rehabilitation programme led by a nurse can significantly improve the health behaviours and cardiac physiological risk parameters in coronary heart disease patients.

Pardro.C.A., (1997) has done a clinical study of a cardiac rehabilitation program (phase ii) in order to determine the adequacy of this program. This data suggest that the patients evaluated present various, risk factors of coronary disease that might predispose to second cardiac or surgical event, or progression of the disease. Also these results suggest that this program might help in improving the risk factors related to health fitness and physical activity.

Dubach .P.et.al.,(1998) studied optimal timing of phase ii rehabilitation after myocardial infarction found that structured program of rehabilitation have been shown to be effective in restoring functional capacity , increasing return to work and improving the psychological status of patient following myocardial infarction.

Mc.Sherry.R.et.al., (1999) studied on the advantage of cardiac rehabilitation and found that cardiac rehabilitation is a significant element in recovery from myocardial infarction . An effective program may reverse arterial damage without the aid of lipid lowering medication.

DIET:

Leslie.W.S., et.al.,(2004) conducted a study on a Transferable Programme of Nutritional Counseling for Rehabilitation in UK. To evaluate the response to simple innovative dietary counseling in post myocardial infarction patients. A total of 69 men and 29 women aged 35-75 y who survived acute myocardial infarction and participated in the cardiac rehabilitation programmes. It revealed that at 12 weeks follow-up, diet composition had improved significantly in intervention subjects, but no such change was evident in the control group.

Karvetti R.L., (1982) conducted a study of effects of nutrition education. A Group of 86 Male M1 patients receiving diet therapy in the form of individual counseling and lecture for food preparation classes and a group of 78 control subjects were studied. The desired changes in food and nutrient intake were greater in the treatment than in the control group. From this study the reduction in the patients weighted and in the level of serum lipids also indicated the effective of nutrition education in comprehension rehabilitation.

Newens A.J., (1997) U.K Studied on changes in reporting dietary habit and exercise level after an uncomplicated first myocardial infarction, states that education of patients and their partners about appropriate lifestyle changes following myocardial infarction MI Key element is rehabilitation, developing relevant educational strategies requires a knowledge of patients beliefs and attitudes. The findings from the survey of diet and exercise in a group of 153 middle aged men who had suffered a first uncomplicated MI.

Griffo .R.et.al., (2000) studied on rehabilitation program for cardiac patient found great improvement in functional capacity and substantial changes in the way of life seem to have been demonstrated with good health oriented behaviors and improvements in the whole risk profile. It has been well proven that with comprehensive rehabilitation program has a relevant

slow down in arteriosclerosis progression. It also has a favourable effect on the quality of life in patients with cardiac disorder with fewer symptoms and more psychological and social well being.

EXERCISE:

Reddy K.S., (2004) et.al., conducted study on Physical activity and risk of coronary heart disease in India. Proved that the important roles of physical exercise in reduce the disease risk in urban India, improvements in physical activity should be promoted.

Anna De Lorenzo et.al.,(2006) conduct study on exercise-Based Cardiac Rehabilitation Improves Heart Rate Recovery in elderly Patients After Acute Myocardial Infarction, Italy. This study aims at evaluated the effect of exercise training (ET) on Heart rate recovery (HRR) in elderly AMI patients. The Study revealed that in older AMI patients, ET results in HRR improvement, which was correlated to the improvement in cardiopulmonary parameters.

Newton M.et.al.,(1991) conducted a study on effects of exercise in a coronary rehabilitation programme. The results indicated that the treatment groups did not improve physiological functioning more than the control groups but they did evidence significant improved psychological functioning.

This investigator appears to be the first attempt to assess the potential benefit of an exercise based cardiac rehabilitation has psychological benefits.

Hamilton D.M.et.al., (2000) studied this validity and reliability of the six minutes walk test, in a phase ii cardiac rehabilitation population to assess the functional status of patients with severe cardiac disease found that the six minutes walk is a valid and reliable method of assessing functional ability in phase ii cardiac rehabilitation population.

MEDICATION:

Miller P.et.al (1985) investigated relationship between demographic variable medical variables, attitudes, perceived beliefs of others and intervention toward medical regimen adherence and actual post hospitalization regimen adherence. This was elicited form 112 person recovering form a first the myocardial infarction, 6 to 9 months post hospitalization attitude, perceives beliefs of other, and adherence behaviors were assessed findings indicate rehabilitation plans for the M1 patient should be individualized for hospital and home and should include data on health belief variables.

Holland w. w., (1991) WHO expert committee has said that if there is a reduction in mean salt intake in the direction of 5gm daily from the present 10-12 gm daily, it might lower average blood pressure with a consequent important fall in the incidence of cardio vascular disease.

Halm M.A et.al.,(1999) have discussed on heart disease in women. The American heart association advices women who have had an myocardial infarction to take a aspirin daily to reduce their risk of second myocardial infarction.

Panagiota S., et.al.,(2001) conducted study on evaluation of motivation in patients with coronary heart disease who participate in different rehabilitation program. From this study patients who participated in the gym program had statistically higher level of knowledge, to stimulation, to accomplishment and emotion to interjected regulation.

STUDIES RELATED TO EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON CARDIAC REHABILITATION:-

Kanmani J(2001) on effectiveness of planned cardiac rehabilitation intervention ,at cochin. The study findings shows that 46.7% had inadequate knowledge,43.3% had moderately adequate knowledge and 10% had adequate knowledge . The overall mean knowledge was 51.19, SD(15.99) .This shows that majority of the patients had inadequate knowledge which could be improved by health education on cardiac rehabilitation. The study revealed that knowledge mean difference 37.65, SD= 13.59 and the 't' value is 15.17 is statically highly significant at $p < 0.01$. This indicate that the level of knowledge has improved by the planned rehabilitation intervention.

Grace J (2001) conducted a study on assessment of knowledge and practice regarding cardiac rehabilitation among post myocardial infarction patients, in MMC at Chennai.10%of patients were performed moderately adequate and 90% them were performed inadequate practice, none of them were possessed adequate practice .The results of this study that 87% of patients were possessed adequate knowledge of physical aspects of rehabilitation and 66% of patients were always practicing.

Lakshmi R. (1994) conducted a study on knowledge, attitude and practice of myocardial infarction patients revealed that they had adequate knowledge only on few aspects. But they need to have knowledge on all aspects of myocardial infarction .This supports the need for importing education on prevention and complication of myocardial infarction. Knowledge gain will help in reducing the client's expenditure on health care.

Uma P (2000) conducted a study on the effectiveness of structured teaching programme on life style modification of post myocardial infarction patients, at Chennai. The experimental group had improvement in knowledge on myocardial infarction (mean score was 54.24 with SD 11.06) improvement was found among the patient on life style modification. Mean score was 44.07 with SD 15.84. The paired't' test value of overall score on the knowledge aspect was 26.21 shows highly significant after structured teaching programme .

Krannich J.H,et.al (2008) conducted a study on the short- and long-term motivational effects of education programme for patients with coronary artery bypass grafting. Coronary artery bypass graft (CABG) surgery is to modify cardiovascular risk factors positively. Among the most potent possibilities for improvement of these factors is a lifestyle change in terms of increasing sports exercise, changing diet patterns, stress reduction, etc. An

indispensable condition for these changes is the motivation to implement the necessary changes. In our working group a patient education programme was developed aimed at enhancing the motivation for lifestyle change, which was already applied in a cardiac surgery hospital. In evaluating the programme, we could observe that various cognitive factors of motivation for lifestyle change had dropped in untreated patients and risen in patients participating in the programme. Data from 108 patients could be evaluated one year after CABG surgery (response rate=77.1%). The programme had comprised individualized units, as well as a group lecture. The positive effects of the patient education programme measured ten days after surgery were found to have vanished one year after the operation. Long-term, structured aftercare programmes should help to stabilize the positive effects obtained in the short term educational programme.

Timmins F,et .al.,(2003) conducted a study on Information needs of myocardial infarction patients. A study to assess the perceptions of patients immediately after their first myocardial infarction of the needs in a cardiac education programme. The study findings revealed that support the need for individualized nurse or patient negotiated cardiac teaching programmes that can be tailored to suit each patient's needs.

Jenkins .B,et.al., (1984) conducted study on patient evaluation of a post myocardial infarction teaching programme administered by nurses. Information included a detailed programme of exercises during convalescence, attitude towards diet, smoking and sexual intervention. The study indicated that between 76% and 91% of patient considered the presentation necessary and there was significant improvement in their understanding of an infarction. The goal majority of patients believed that more health education should be given at school and that members of the general public should be taught the technique of cardiac rehabilitation.

Garding B.S.et.al., (1988) studied the impact of patient education follow-up by telephone on the knowledge of post myocardial infarction patients. On the basic of Orem's self care frame work subject level of knowledge in six criterion areas were assessed. Finding demonstrates that a telephone teaching programme for myocardial infarction patients 6-8 weeks after hospital discharge can be effective in increasing knowledge relative to disease, self care and therapeutic regimen.

Strömberg .A, et.al.,(2002) conducted study on interactive education on CD-ROM-a new tool in the education of heart failure patients. The study aimed to develop and evaluate whether a computer-based program for patients with heart failure was user-friendly, could be operated by elderly

patients and gave sufficient information about heart failure. The nurses reported that the patients were positive towards the computer and seemed to understand the information and that the patient education was less time-consuming, when the patients could seek knowledge on their own.

Handler T.J. et.al., (1995) identify the increase in computer-assisted instructional applications (CAI) over the past few years, little attention has been paid to revising traditional approaches toward educational testing. The program uses a method which, in addition to validating the efficacy of the project itself, collects data and stratifies users' level of proficiency by integrating pre-test and post-test modules. CAI may provide a more effective means of correctly evaluating the individual's mastery of a topic.

CHAPTER – III

METHODOLOGY

This Chapter deals with the research approach, design , setting of the study, population criteria for sample selection, tool, scoring, procedure, validity, reliability, pilot study and data collection procedure.

RESEARCH APPROACH:

The evaluative approach was selected for this study.

RESEARCH DESIGN:

Pre experimental design (ie) One group pretest, post test design.

Group	Pretest	Intervention	Post test
I	O ₁	X	O ₂

GROUP-I : Patients who are admitted in hospital with myocardial infarction.

O₁ : Pretest - collection of demographic data, assessment of knowledge, attitude, practice regarding cardiac rehabilitation.

X : Implementing structured teaching programme regarding cardiac rehabilitation.

O₂ : Post test –Assessment of knowledge, attitude, and practice regarding cardiac rehabilitation.

SETTING OF THE STUDY:

The study was conducted in KMC Hospital, Trichy. It is a private hospital. It has 6 floors, and 250 bedded hospital. It consists of all the specialties including medicine, surgery, ENT, cardiology, pediatric, Nephrology and Neurology, oncology, and obstetrics and gynecology. It has the services like out patient department, in patient department, emergency, and intensive care unit. It has separates male and female ward, ICU, medical ward, surgery, special, and deluxe ward. The hospital is well equipped with modern technique competent and complex equipment machine. The present study was conducted in cardiology ward in 5th floor. Patients are admitted with cardiac conditions like myocardial infarction, angina, heart failure, septal defect, pulmonary edema and embolism. The bed occupancy in the cardiology ward is approximately 8-10 cases per day. Out of which 3-4 were patients with myocardial infarction. The number of patients with myocardial infarction is 40-60 per month.

POPULATION:

In the present study target population was defined as the patients who are diagnosed as myocardial infarction admitted in KMC hospital, Trichy.

SAMPLE:

The sample constitutes with myocardial infarction who were admitted in cardiology ward in KMC Hospital, Trichy.

CRITERIA FOR SAMPLE SELECTION:**INCLUSION CRITERIA:**

- ◆ Patients who are admitted with first and second attack of myocardial infarction.
- ◆ Patients with the age group of 20-60 years.
- ◆ Patients who are transferred to cardiology ward
- ◆ Patients who are willing to participate in this study.
- ◆ Patients who can understand and speak Tamil.
- ◆ Patients with hospital stay for minimum of 7 days.

EXCLUSION CRITERIA:

- ◆ Patients who are admitted in ICU.
- ◆ Patients who are with hearing and vision problem.
- ◆ Patient who are critically ill.
- ◆ Patient with other associated cardiac disease.

SAMPLING TECHNIQUE:

Purposive sampling technique was used to select the sample.

SAMPLE SIZE:

The sample size consists of 60 patients with myocardial infarction.

INSTRUMENT AND SCORING PROCEDURE:

Description of the tool. The tool consists of 4 parts.

PART – 1

It consists of demographic variable of myocardial patients were age, sex, marital status, education, occupation, monthly income, residence, and number of myocardial infarction attack.

PART – II

Structured interview schedule was used to assess the level of knowledge regarding cardiac rehabilitation among patients with myocardial infarction. It consists of 25 multiple choice questions with four options for each question and patients are expected to choose one correct option. Correct answer is given a score as one. Total score is 25.

PART – III

Five point likert scale was used to assess the attitude of patients regarding cardiac rehabilitation among patients with myocardial infarction. It has 10 dichotomous type of questions out of which 5 are positive statements and 5 are negative statements. Total score is 50.

PART – IV

Structured Observational check list was used to assess the practice of patient regarding cardiac rehabilitation among patients with myocardial infarction. Total score is 10. It consists of 10 items with alternative response of “yes” or “no”.

SCORING PROCEDURE:

PART – II

Structured interview schedule was used to assess the level of knowledge regarding cardiac rehabilitation among patients with myocardial infarction.

KNOWLEDGE SCORE:

Level of knowledge	Score	Percentage
Adequate knowledge	17-25	67 – 100%
Moderately Adequate knowledge	9 -16	34 - 66%
Inadequate knowledge	1 – 8	0 - 33%

PART – III

Five Point likert scale was used to assess the attitude regarding cardiac rehabilitation among patients with myocardial infarction.

For the Positive response score was measured as follows:

Strongly Agree-5

Agree -4

Uncertain-3

Disagree -2

Strongly disagree-1

For the negative statements the score was measured as follows:

Strongly Agree-1

Agree -2

Uncertain-3

Disagree -4

Strongly disagree-5

ATTITUDE SCORE:

Level of Attitude	Score	Percentage
Favourable attitude	35-50	67-100%
Moderately favourable	18-34	34 -66%
unfavourable attitude	1-17	1 -33%

PART – IV

Check list was used to assess the practice regarding cardiac rehabilitation among patients with myocardial infarction.

Level of Practice	Score	Percentage
Adequate practice	7-10	67 – 100%
Moderately Adequate practice	4-6	34 -66%
Inadequate practice	0-3	<33%

VALIDITY AND RELIABILITY

VALIDITY:

The validity of the tool was established in consultation with four nursing experts in the field of medical surgical and in the field of cardiology. The tool was modified according to the suggestions and recommendations of experts and finalized.

RELIABILITY:

The reliability of the structured interview schedule on knowledge questionnaire was assessed by testing the stability and internal consistency. The Karl Pearson co-efficient formula was used to assess the stability using test retest method. The value was found to be reliable ($r=0.9$). The Spearman's

brown prophecy formula was used to assess the internal consistency by using split half technique. The value was found to be reliable ($R = 0.94$).

The reliability of the Five point likert scale on attitude regarding cardiac rehabilitation among patients with myocardial infarction was computed by test retest method and was found to be reliable ($r=0.93$).

The test retest method was used to assess the stability of practice questionnaire. The value was found to be reliable ($r=0.87$). The spearman's brown prophecy formula was used to assess the internal consistency by using split half technique. The value was found to be reliable ($R = 0.80$).

PILOT STUDY:

The pilot study was conducted for a period of 7 days. The investigator obtained written permission from the medical officer and oral consent from each participant prior to the study in KMC hospital, Trichy.

The purpose of the study was explained to the subjects prior to the study. The researcher introduced about the study to the patients and established rapport with them and demographic variables are collected from the patients with myocardial infarction, after third day of admission to be selected as samples. 6 patients were selected by using the purposive sampling

technique. The knowledge was assessed by using structured knowledge interview schedule and practice assessed by using observational checklist and attitude was assessed by using five point likert scale for 30 minutes. After pretest, structured teaching programme was given using laptop with compact disc on same day (third day) for 45-50 minutes. Effectiveness was assessed on seventh day by using same tool to assess the knowledge, attitude and practice regarding cardiac rehabilitation among patients with myocardial infarction. Data were analyzed and effectiveness was evaluated. 2-4 patients were selected for data collection per day .The findings of the pilot study showed that the mean post test knowledge score (16) was significantly higher than the mean pretest knowledge score (9), the mean posttest attitude score (31) was significantly higher than the mean pretest attitude score (22.16) and the mean posttest practice score (6.3) was significantly higher than the mean pretest practice score (1.73). Pilot study revealed that it is feasible and practicable to conduct the main study.

DATA COLLECTION PROCEDURE:

The main study was conducted in KMC specialty hospital, at Trichy, in the month of August 2009. The data collection period was five weeks. The investigator obtained written permission from the chief medical officer and medical superintendent and oral consent from each participant prior to the study. Data were collected from 60 patients who fulfilled the criteria.

Demographic data was collected and the pretest was conducted to assess the knowledge by using the structured interview schedule, five point likert scale was used to assess attitude and observational check list was used to assess practice for 45 -50 minutes. Immediately after the pretest the same day structured teaching programme was given regarding cardiac rehabilitation by using Compact disc and laptop for 45 minutes. The structured teaching programme was given for 2-4 patients individually per day. The post test was conducted on seventh day by using the same structured interview schedule, five point likert scale and observational check list.

PLAN FOR DATA ANALYSIS:

Descriptive and inferential statistics were used for data analysis. The collected data was tabulated and analyzed using descriptive statistics, inferential statistical method used for data analysis were frequency, percentage, mean and standard deviation, paired't' test and chi-square test.

DATA ANALYSIS PROCEDURE:

Sl. No.	Data analysis	Methods	Remarks
1.	Descriptive statistics	Frequency percentage Mean standard deviation	<ul style="list-style-type: none"> • To describe the demographic variables among patient with myocardial infarction. • To assess the pre and post test knowledge, attitude and practice scores regarding cardiac rehabilitation among patients with myocardial infarction.
2.	Inferential statistics	Paired' t' test Karl Pearson formula Chi square test	<ul style="list-style-type: none"> • To find out a relationship between the knowledge and practice scores regarding cardiac rehabilitation among patients with myocardial infarction. • To find out a relationship between the knowledge and practice scores regarding cardiac rehabilitation among patients with myocardial infarction. • To find out the association between posttest knowledge, practice, scores regarding cardiac rehabilitation among patients with myocardial infarction with their selected demographic variables.

PROTECTION OF HUMAN SUBJECTS:

The research proposal was approved by the dissertation committee prior to conducting the pilot study and the main study. The written permission obtained from chief medical officer and medical superintendent of KMC Hospital. Oral consent was obtained from each participant before data collection.

CHAPTER - IV

DATA ANALYSIS AND INTERPRETATION

This chapter deals with the analysis and interpretation of the data collected to assess the effectiveness of the structured teaching programme regarding cardiac rehabilitation in terms of knowledge, attitude and practice among patients with myocardial infarction at KMC hospital, Trichy.

Analysis is a process of organizing and synthesizing data in such a way that the research questions can be answered and hypothesis tested.

Data were collected from 60 patients with myocardial infarction in KMC hospital at Trichy and by using structured interview schedule, attitude five point likert scale and observational check list. The data thus obtained were analyzed and presented under the following sections.

ORGANIZATION OF DATA:

SECTION – A -Assess the demographic variables.

SECTION – B - Assess the knowledge, attitude and practice regarding cardiac rehabilitation among patient with myocardial infarction during pretest.

SECTION – C - Assess the knowledge, attitude and practice regarding cardiac rehabilitation among myocardial infarction patients during posttest.

SECTION – D - Comparison between pretest and post test Knowledge, attitude and practice scores regarding cardiac rehabilitation among patients with myocardial infarction.

SECTION – E - Correlation of posttest knowledge scores and practice scores regarding cardiac rehabilitation among patients with myocardial infarction.

SECTION – F - Association of posttest knowledge scores regarding cardiac rehabilitation among patients with myocardial infarction with their selected demographic variables.

SECTION –G - Association of posttest practice scores regarding cardiac rehabilitation among patients with myocardial infarction with their selected demographic variables.

SECTION – A DISTRIBUTION OF DEMOGRAPHIC VARIABLES

Table - 1: Number and percentage distribution of demographic variables among myocardial infarction patients.

n=60

S. No	DEMOGRAPHIC VARIABLES	NUMBERS	PERCENT (%)
(1).	AGE (years)		
1.1	20-30	7	12
2.1	31-39	10	17
3.1	40-49	18	30
4.1	50-60	25	41
(2).	SEX		
2.1	Male	37	62
2.2	Female	23	38
(3).	MARRITAL STATUS		
3.1	Married	45	75
3.2	Unmarried	9	15
3.3	Widow/widower/divorce	6	10
(4).	EDUCATIONAL STATUS		
4.1	No formal education	10	17
4.2	Primary school	21	35
4.3	High school	10	17
4.4	Higher Secondary	17	28
4.5	Graduates	2	3

(5).	OCCUPATION		
5.1	Private employee	17	28
5.2	Govt. employee	9	15
5.3	Self employee	20	34
5.4	Un employed/house wife	3	5
5.5	coolie	11	18
(6).	RELIGION		
6.1	Hindu	36	60
6.2	Muslim	15	25
6.3	Christian	9	15
6.4	Others	-	-
(7).	FAMILYMONTHLY INCOME (RS)		
7.1	Less than 2000	37	61
7.2	2001- 5000	22	37
7.3	5001- 10,000	1	2
7.4	Above- 10,000	-	-
(8).	AREA OF RESIDENCE		
8.1	Rural	38	63
8.2	Urban	22	37
(9).	NO OF MI ATTACK		
9.1	First attack	37	62
9.2	Second attack	23	38

The table -1 showed that among 60 myocardial infarction patients. Percentage distribution of patients with according to their age group depicts that the highest percentage 25(41%) of patients belonged to the age group of 50-60. 18(30%) were between the age group of 40-49 years. 10(17%) patients were between the age group of 31-39 and 7(12%) patients were between the age group of 20-30 . it shows that most of the patients were above 50 years of age with myocardial infarction (fig-2) .

Percentage wise distribution of patients with according to their sex reveals the higher percentage 32(53%) myocardial infarction patients were male when compared to the females 28(47%). Males are more affected than female, (fig-3).

The data showed that the most of the patient 45(75%) were married, 9(15%) patients were unmarried, and 6 patients were widow respectively, (fig-4).

Percentage distribution of patients with myocardial infarction according to their education 21 (35%) were studied up to primary school, 17(28%) were studied up to higher secondary, 10(17%) were studied up to high school, and 2(3%) were graduates,10(17%) myocardial infarction patients were patients were no formal education. (fig-5).

The distribution showed that 20 (34%) were self employed, 17(28%) myocardial infarction patients were private employee, 11(18%) were coolie workers , 9 (15%) were government employee and 3 (5%) were unemployed. It might be due to the poor educational status, (fig -6).

With regard to religion of patients with myocardial infarction showed that most of the patients 36(60%) were Hindus, 15(25%) were Christians and 9(15%) were Muslims. To area of study was a Hindus dominated area (fig-7).

Percentage wise distribution of patients with myocardial infarction according to their monthly income 37(61%) had income less than Rs. 2000, 22(37%) had income between Rs. 2001-Rs. 5000, one (2%) had income between Rs. 5001-10000 (fig-8).

Distribution of patients with myocardial infarction according to their area of residence reveals that 38(63%) were from rural areas and 22(37%) were from urban areas. (fig-9).

According to the distribution of patients with myocardial infarction on basis of the number of MI attack 37(62%) had first attack, 23 (38%) had second attack of myocardial infarction respectively, (fig-10).

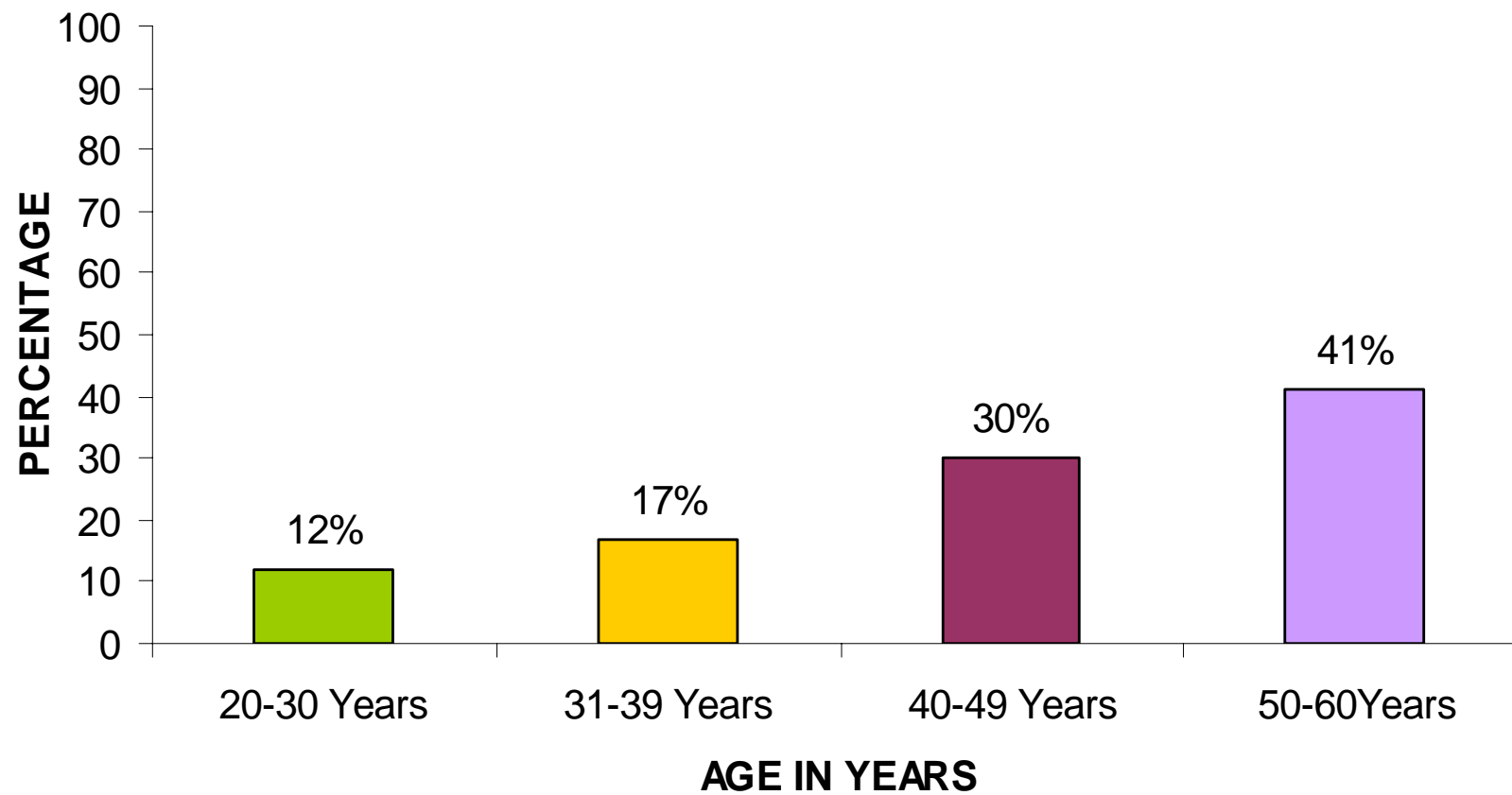


Fig. 2. Percentage distribution of patients with myocardial infarction according to their age

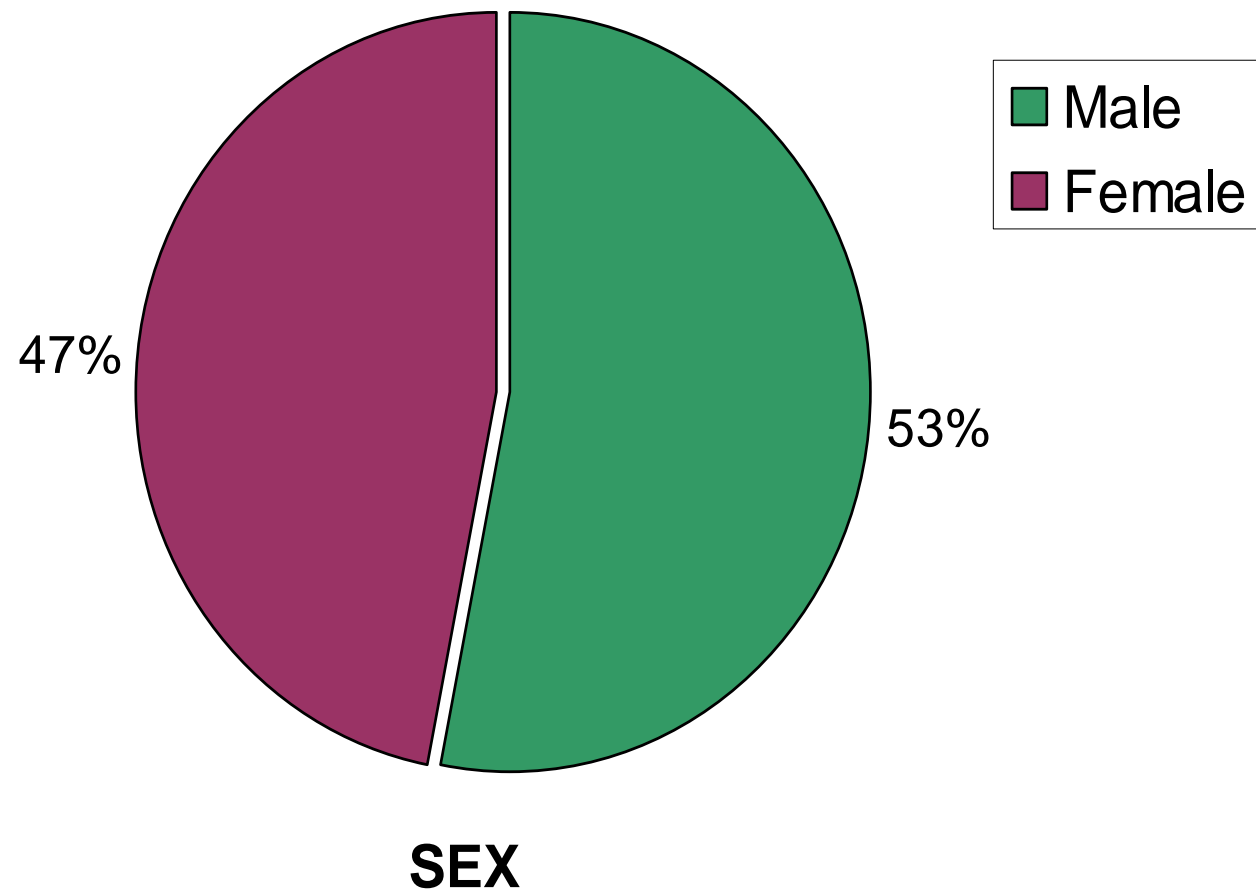


Fig.3. Percentage distribution of patients with myocardial infarction according to their sex

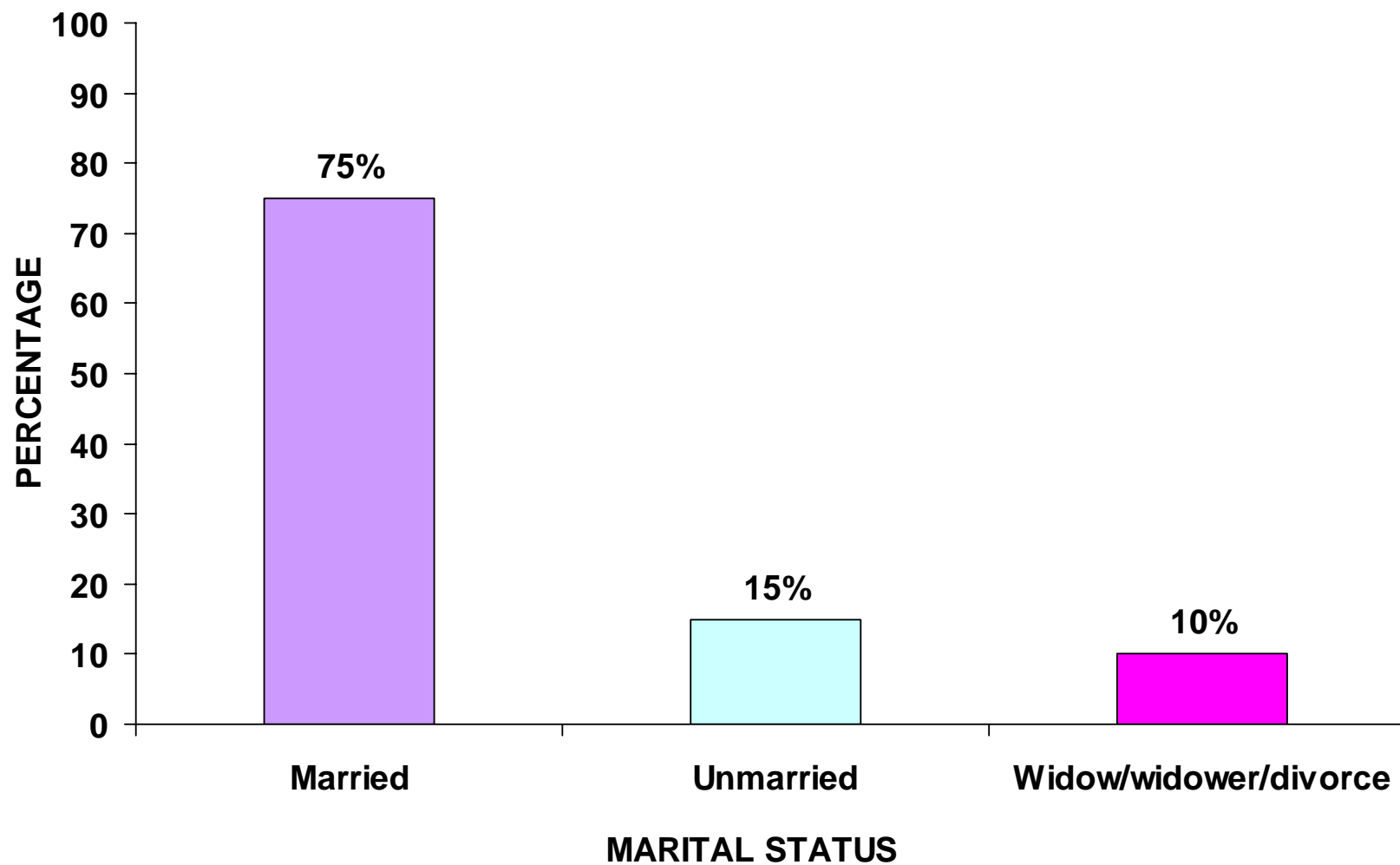


Fig 4. Percentage distribution of patients with myocardial infarction according to their marital status

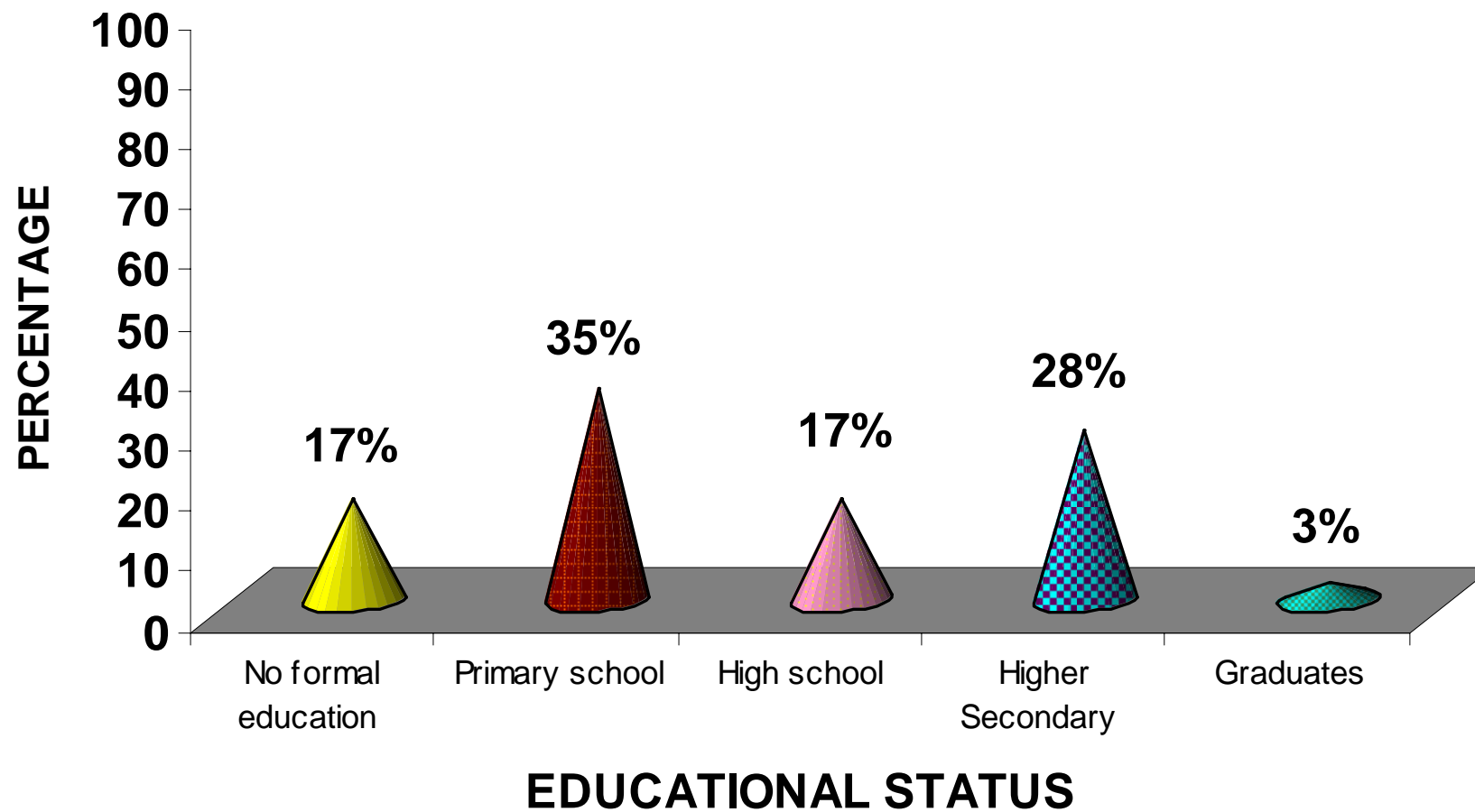


Fig. 5. Percentage distribution of patients with myocardial infarction according to their educational status

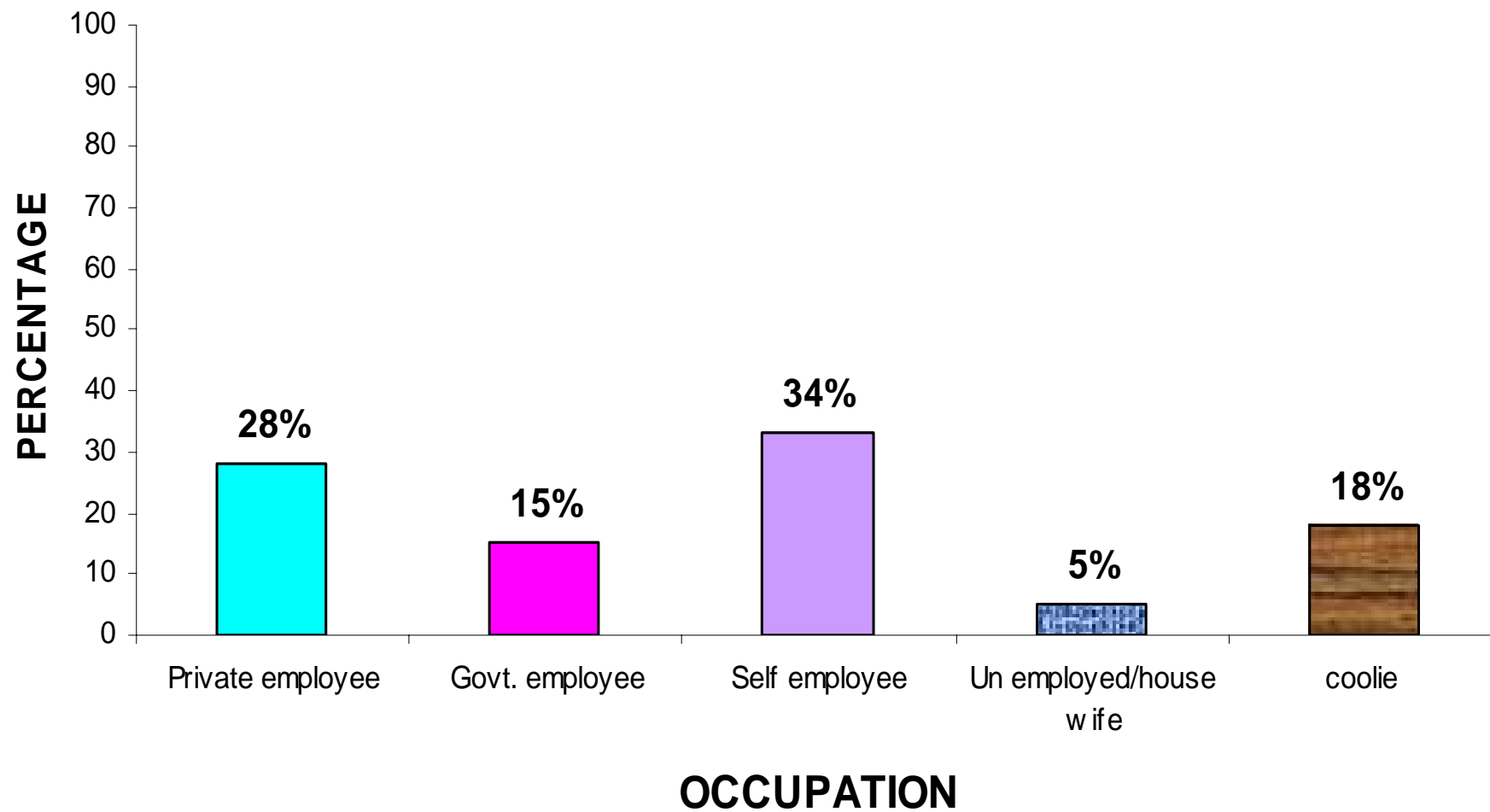


Fig. 6. Percentage distribution of patients with myocardial infarction according to their occupation

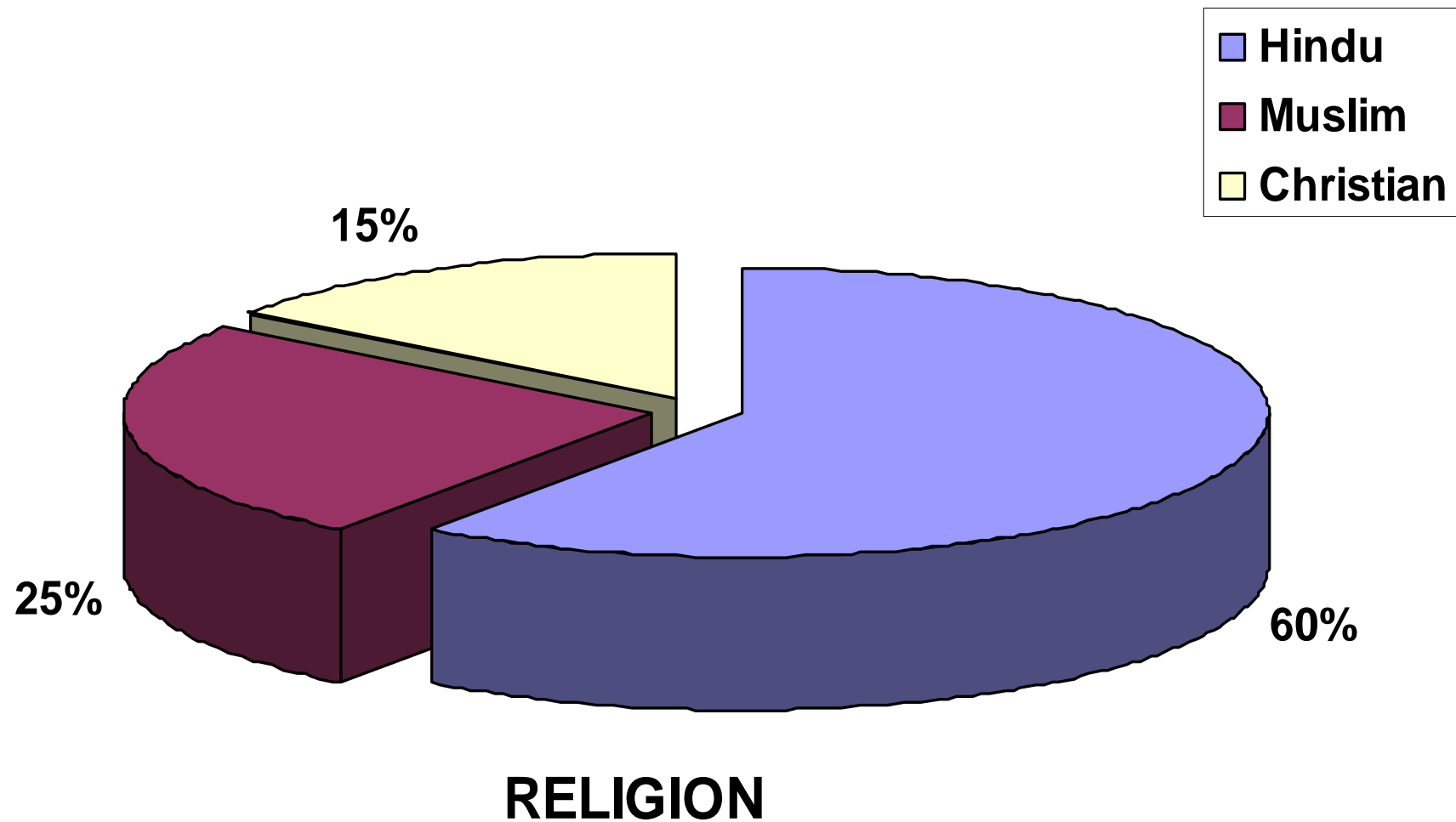


Fig.7. Percentage distribution patients with myocardial infarction according to their religion

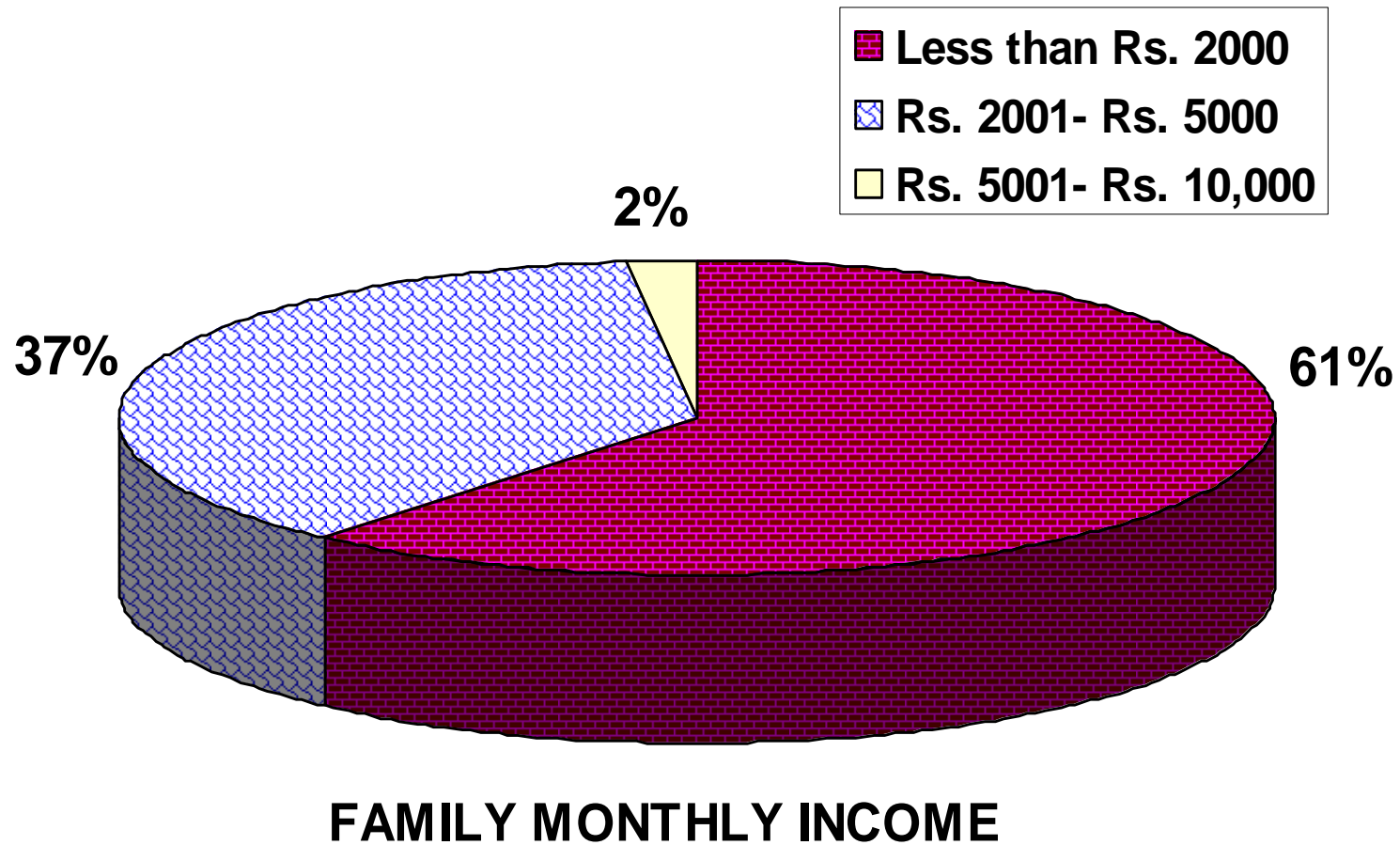
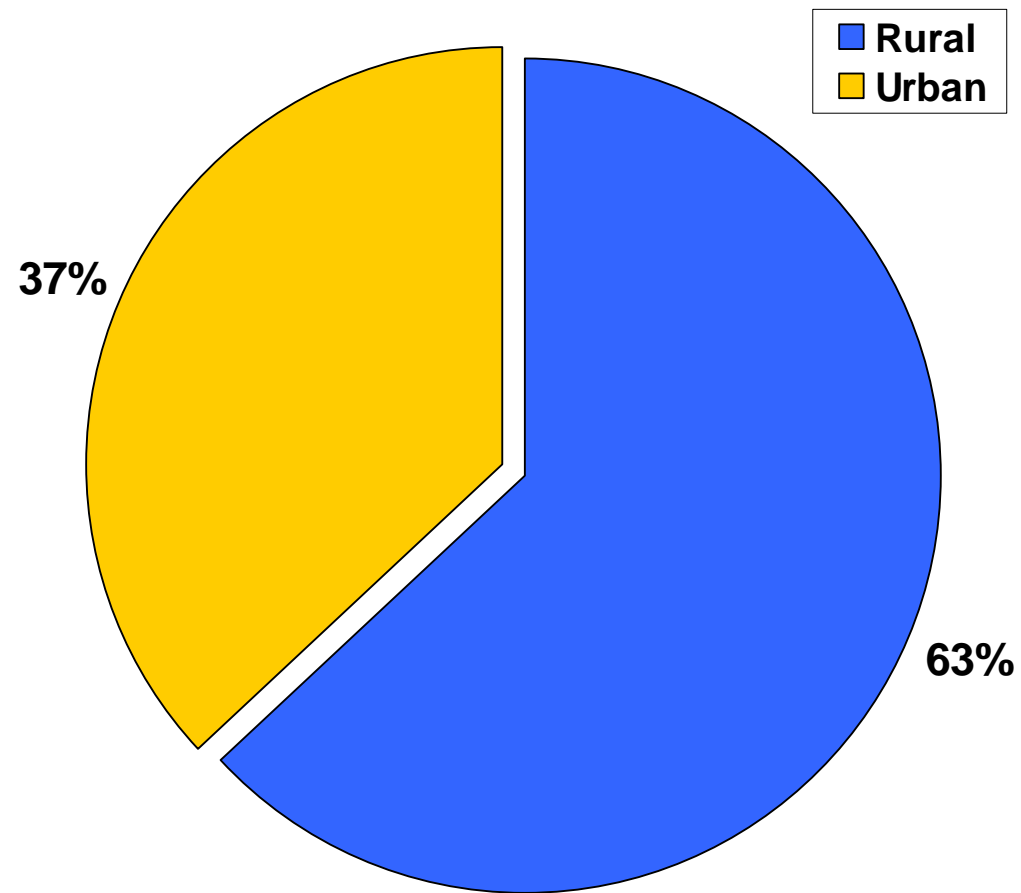
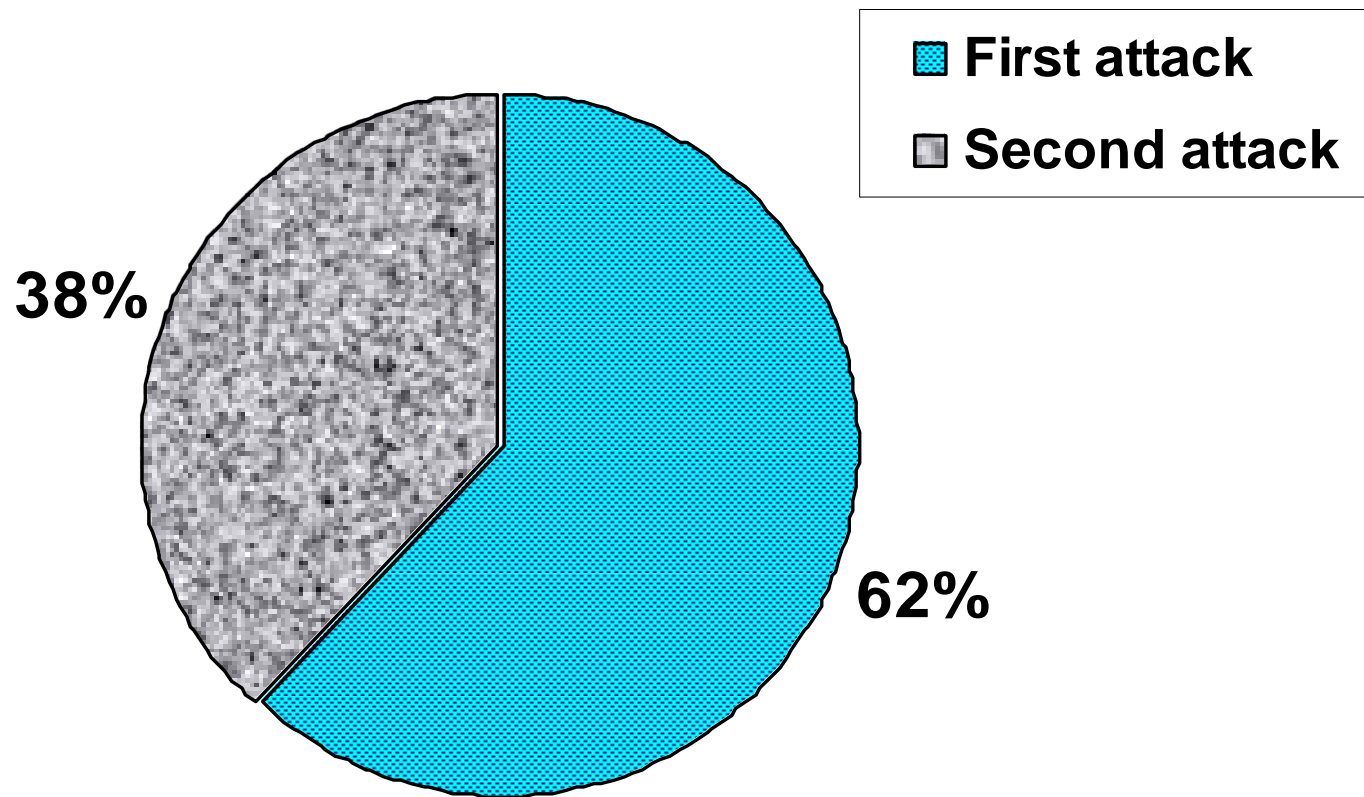


Fig.8. Percentage distribution of patients with myocardial infarction according to their monthly income



AREA OF RESIDENCE

Fig.9. Percentage distribution of patients with myocardial infarction according to their area of residence.



NUMBER OF ATTACK

Fig.10. Percentage distribution patient with myocardial infarction according to their number of attack

**SECTION – B : COMPARISON BETWEEN PRE AND POST TEST
KNOWLEDGE, ATTITUDE AND PRACTICE SCORES AMONG
PATIENTS WITH MYOCARDIAL INFARCTION.**

n=60

Level of knowledge	Pretest		Posttest	
	f	%	F	%
Adequate knowledge	6	10	31	52
Moderately Adequate knowledge	28	47	29	48
Inadequate knowledge	26	43	-	-
Total	60	100	60	100

Table : 2 showed that in pretest of 26 (43.3%) had inadequate knowledge 28 (47%) myocardial infarction patients had moderately adequate knowledge and 6 (10%) patients had inadequate knowledge regarding cardiac rehabilitation.

In posttest 31(52%) had adequate knowledge, 29(48%) had moderately adequate knowledge regarding cardiac rehabilitation, (fig-11).

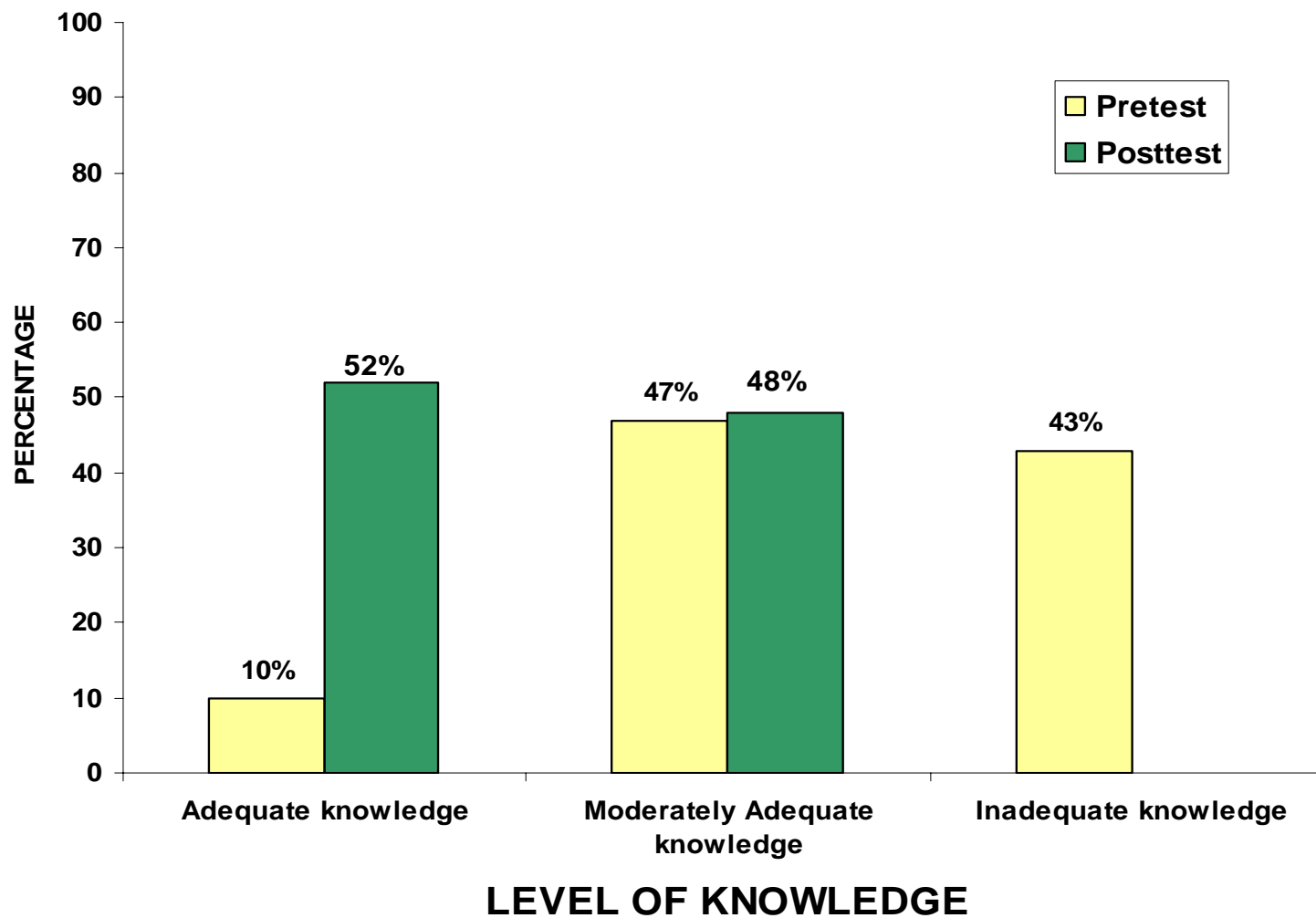


Fig 11: compare the pretest and post test knowledge score regarding cardiac rehabilitation among patients with myocardial infarction.

Table 3: Compare the pretest and post test attitude scores regarding cardiac rehabilitation among patients with myocardial infarction.

n=60

Attitude	Pretest		Posttest	
	f	%	f	%
Favourable attitude	3	5	15	25
Moderately Favourable attitude	24	40	45	75
Unfavorable attitude	33	55	..	-
Total	60	100	60	100

Table 3: Showed that in pretest, 3(5%) had favourable attitude and 24(40%) had moderately favourable attitude, 33(55%) had unfavorable attitude regarding cardiac rehabilitation among patients with myocardial infarction. In post test, 15(25%) had favourable attitude and 45(75%) had moderately favorable attitude regarding cardiac rehabilitation among patients with myocardial infarction, (fig-12).

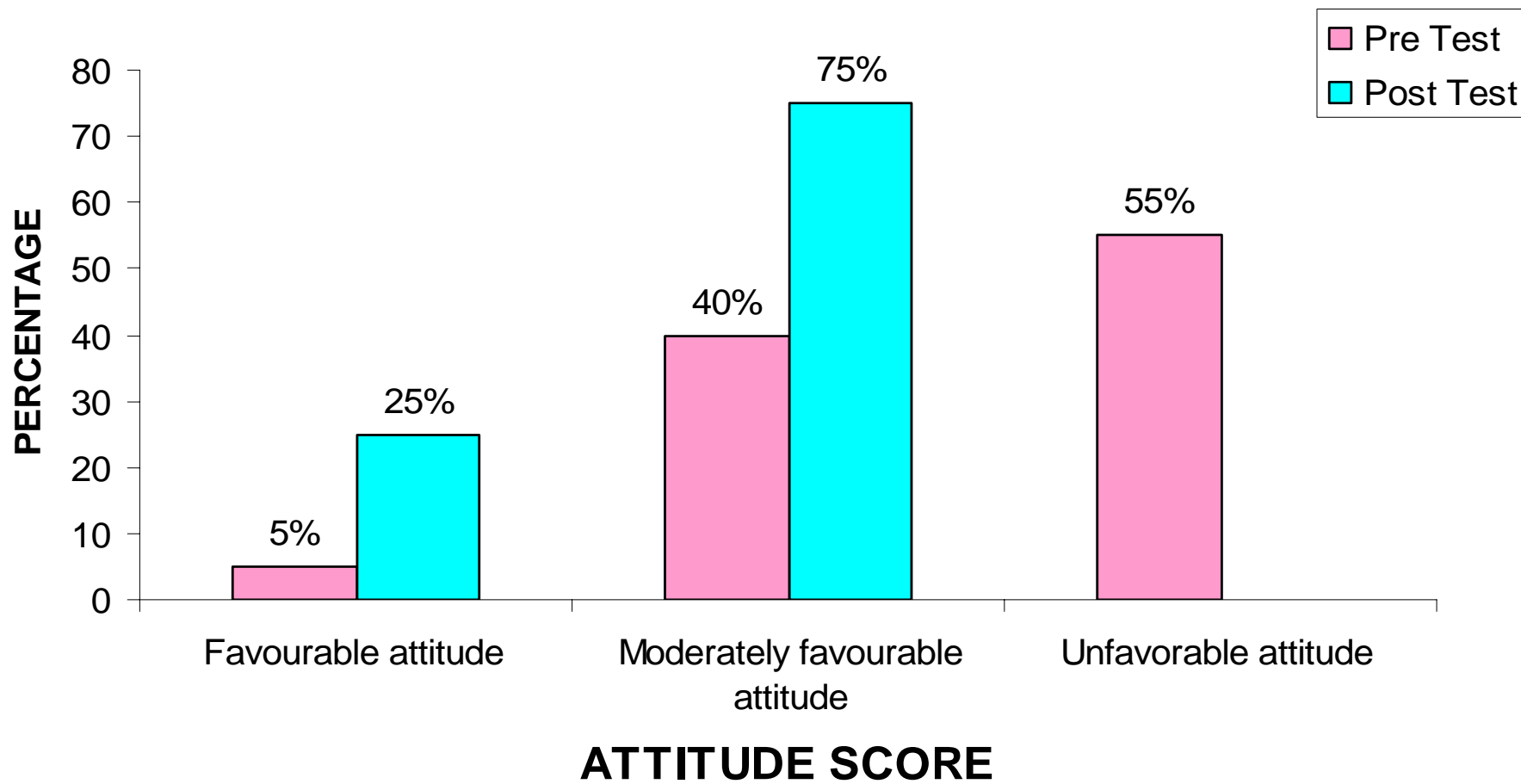


Fig. 12. Compare the pretest and post test attitude score regarding cardiac rehabilitation among patients with myocardial infarction

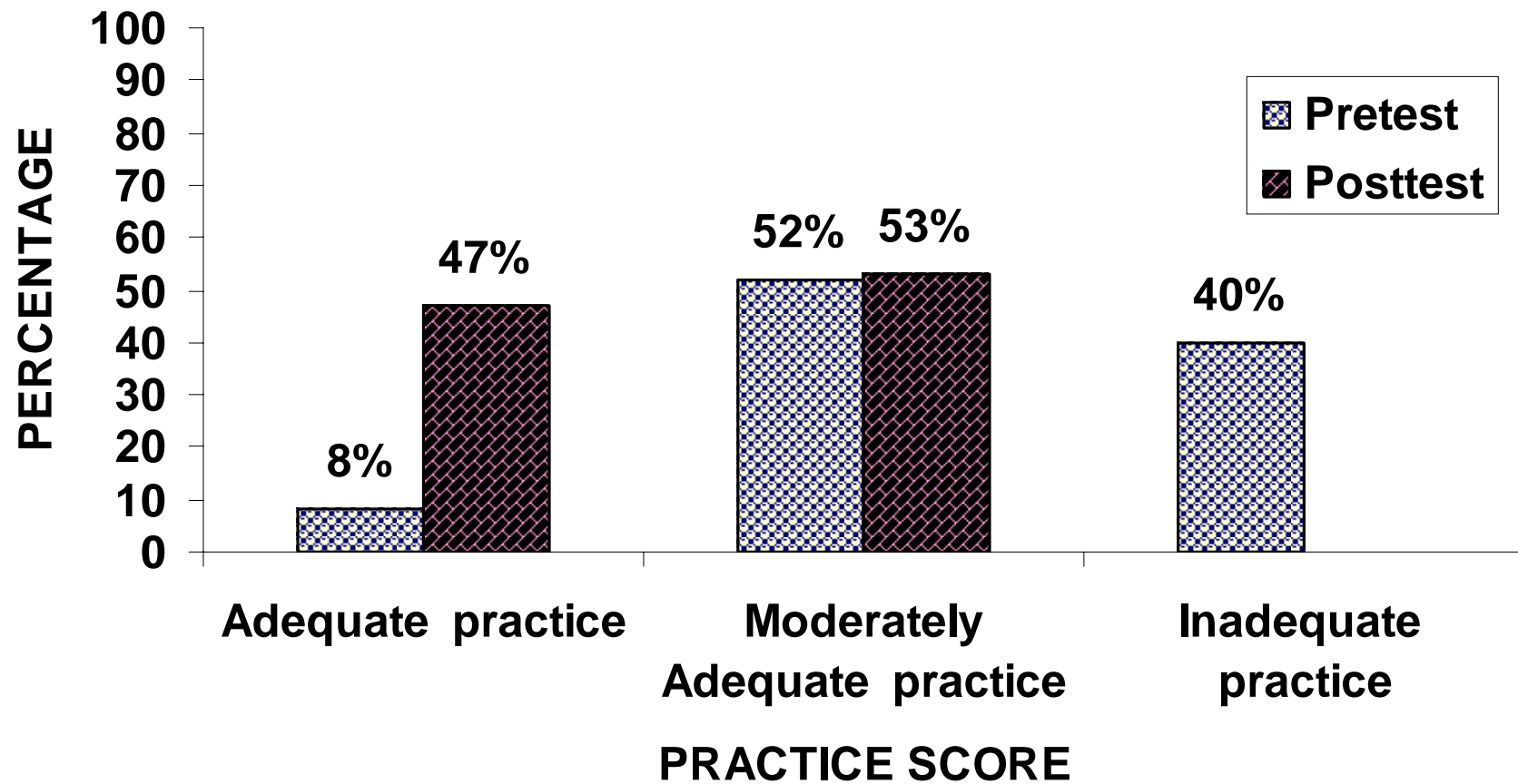
Table 4: Compare the pretest and post test practice Scores regarding cardiac rehabilitation among patients with myocardial infarction.

n=60

Practice	Pretest		Posttest	
	N	%	N	%
Adequate practice	5	8	28	47
Moderately Adequate practice	31	52	32	53
Inadequate practice	24	40	-	-
Total	60	100	60	100

Table 4: showed that in pretest of myocardial infarction patients 5(8%) had adequate practice, 31(52%) had moderately adequate practice and 24(40%) had inadequate practice regarding cardiac rehabilitation.

In post test, 28 (47%) had adequate knowledge on practice, 32(53%) had moderately adequate knowledge on practice regarding rehabilitation. (fig-13).



(Fig:13)Compare the pretest and post test practice Scores regarding cardiac rehabilitation among patients with myocardial infarction.

Table -5 : comparison of Mean, SD and 't' value of pre test and posttest knowledge scores regarding cardiac rehabilitation among patients with myocardial infarction .

n=60

s. no	variables	mean	SD	't'	table value
1.	Pre test	10	3.46	12.074	1.671
2.	Post test	16.2	3.54		

df (59)

(P<0.05)

The table (5) showed that the mean score of pre and post test of knowledge regarding rehabilitation among patients with myocardial infarction patients were Mean 10, SD 3.46 and Mean 16.2 , SD 3.54 respectively.

Post test mean score regarding cardiac rehabilitation among patient with myocardial infarction is higher than the pretest mean score. From the t' value is 12.074 which is significant at 0.05 level.

Table – 6 : comparison of mean, SD and ‘t’ value in pretest and post test attitude scores regarding cardiac rehabilitation among patients with myocardial infarction .

n= 60

Sl.no	Test	mean	SD	‘t’	Table value
1.	Pre test	19.8	7.05	10.836	1.671
2.	Post test	28	9.80		

df (59)

(P<0.05)

The table (6) showed that the mean score of pre and post test of the regarding rehabilitation among patients with myocardial infarction were Mean19.8 , SD 7.05 and Mean 28, SD 9.80 respectively.

Post test mean score regarding cardiac rehabilitation among patient with myocardial infarction is higher than the pretest mean score. From the table ‘t’ value is 10.836 which is significant at 0.05 level.

Table - 7 :Comparison of mean, SD and ‘t’ value in pretest and posttest practice scores regarding cardiac rehabilitation among patients with myocardial infarction .

n=60

s. no	Test	mean	SD	‘t’	Table value
1.	Pre test	4.2	1.08	11.455	1.671
2.	Post test	6.3	1.38		

df (59)

(P<0.05)

The table (7) Showed that the mean score for pretest and posttest of the patients with myocardial infarction knowledge on practice regarding cardiac rehabilitation were Mean 4.2, SD 1.08 and Mean 6.3, SD 1.38 respectively.

Post test mean score regarding cardiac rehabilitation among patient with myocardial infarction is higher than the pretest mean score.

From the table t’ value is 11.455 which is significant at 0.05 levels.

SECTION – C : CORRELATION OF POST TEST KNOWLEDGE SCORES WITH PRACTICE SCORES REGARDING CARDIAC REHABILITATION AMONG PATIENTS WITH MYOCARDIAL INFARCTION .

Table – 8 : correlation between the mean post test knowledge and practice scores regarding cardiac rehabilitation among patients myocardial infarction .

n=60

s. no	Variables	Mean	SD	Co -efficient of correlation	Table value
1.	knowledge scores	16.2	3.54	0.91	0.2108
2.	practice scores	6.3	1.38		

df (58) P<0.05)

The table (8) showed that there is a positive correlation ($r=0.9$) between mean post test knowledge and practice regarding cardiac rehabilitation among patients with myocardial infarction.

SECTION – D : ASSOCIATION OF POST TEST KNOWLEDGE SCORE REGARDING CARDIAC REHABILITATION AMONG PATIENTS WITH MYOCARDIAL INFARCTION WITH THEIR SELECTED DEMOGRAPHIC VARIABLES .

Table – 9 : Association of posttest knowledge scores regarding cardiac rehabilitation among patients with myocardial infarction with their selected demographic variables.

n=60

Demographic Variables	Level of knowledge						χ^2	Table Value	Inference
	Adequate		Moderately Adequate		Inadequate				
	N	%	N	%	N	%			
1. AGE(years)									
20-30	3	5	4	7	-	-	21.41	3.841	S
31-39	5	8	5	8	-	-			
40-49	11	18	7	12	-	-			
50-60	9	15	16	27	-	-			
2. SEX									
Male	17	28	20	34	-	-	4.40	3.841	S
Female	11	1	12	20	-	-			

3.MARITAL STATUS									
Married	23	38	22	37	-	-			
Unmarried	5	8	4	7	-	-	0.554	3.841	NS
Widow/widower/ Divorce	1	2	5	8	-	-			
4.EDUCATION									
No formal education	3	5	7	12	-	-			
Primary school	10	17	11	18	-	-	23.65	3.841	S
High School	5	8	5	8	-	-			
Higher secondary	11	18	6	10					
Graduates	1	2	1	2					
5.OCCUPATION									
Private employee	8	13	9	15	-	-			
Govt. employee	6	10	3	5	-	-	5.10	3.841	S
Self employee	10	17	10	17	-	-			
Un employee	2	3	1	2	-	-			
Coolie	3	5	8	13	-	-			
6.RELIGION									
Hindu	20	33	16	27	-	-			
Christian	7	12	8	13	-	-			
Muslim	4	7	5	8	-	-	3.64	3.841	NS
Others	-	-	-	-	-	-			

7.FAMILY MONTHLY INCOME(RS)									
Less than - 2000	20	33	17	28	-	-			
2001- 5000	10	17	12	20	-	-	4.99	3.841	S
5001- 10,000	1	2	-	0	-	-			
Above - 10,000	-	-	-	-	-	-			
8.AREA OF RESIDENCE									
Rural	21	35	17	28	-	-	6.91	3.841	S
Urban	10	17	12	20					
9. No of MI ATTACK									
First time	18	30	19	32					
Second time	9	15	14	23	-	-	13.810	3.841	S

df (1) S – Significant, N.S. – Not Significant P< 0.05 level

Table – 9 showed that Chi square values were calculated to find out the association (table 9) between the knowledge regarding cardiac rehabilitation among patients with myocardial infarction with age (21.41), Sex (4.40), Education status (23.65), occupation(5.13),family monthly income(4.99), area of residence(6.91) and number of attack (13.81) were associated with knowledge regarding cardiac rehabilitation among patients with myocardial infarction, Other demographic variables (Marital status, Religion,) had no association with knowledge regarding cardiac rehabilitation.

**SECTION: E: ASSOCIATION OF POST TEST PRACTICE
REGARDING CARDIAC REHABILITATION AMONG PATIENTS
WITH MYOCARDIAL INFARCTION WITH THEIR
DEMOGRAPHIC VARIABLES:**

Table 10: Association of post test practice regarding cardiac rehabilitation among patients with myocardial infarction with selected demographic variables.

n=60									
Demographic Variables	Practice						χ^2	Table Value	Inference
	Adequate		Moderately Adequate		Inadequate				
	N	%	N	%	N	%			
1. AGE(years)							25.85	3.841	S
20-30	2	3	5	8	-	-			
31-39	6	10	4	6	-	-			
40-49	10	17	7	12	-	-			
50-60	12	20	14	24	-	-			
2. SEX							6.86	3.841	S
Male	15	25	17	29	-	-			
Female	10	16	18	30	-	-			
3.MARITAL STATUS							9.05	3.841	S
Married	18	30	19	32	-	-			
Unmarried	8	13	10	17	-	-			
Widow/ widower/ divorce	3	5	2	3	-	-			
4.EDUCATION							3.53	3.841	NS
Illiterate	4	7	7	11	-	-			
Primary school	11	18	11	18	-	-			
High School	4	7	6	10	-	-			
Higher secondary	7	13	8	12	-	-			
Graduates	1	2	1	2	-	-			

5.OCCUPATION									
Private employee	7	12	10	17	-	-			
Govt. employee	5	8	3	6	-	-			
Self employee	9	15	11	18	-	-	0.66	3.841	NS
Un employee	2	3	2	3	-	-			
Coolie	3	5	8	13	-	-			
6.RELIGION									
Hindu	14	23	21	35	-	-			
Christian	11	18	4	7	-	-	8.39	3.841	S
Muslim	4	7	6	10	-	-			
Others	-	-	-	-	-	-			
7.FAMILY MONTHLY INCOME (RS)									
	5	8	8	13	-	-			
Less than- 2000	15	26	10	17	-	-			
2001- 5000	7	12	8	13	-	-	11.29	3.841	S
5001- 10,000	2	3	5	8	-	-			
above - 10,000									
8.AREA OF RESIDENCE									
Rural	19	31	21	35	-	-	19.01	3.841	NS
Urban	10	17	10	17	-	-			
9.NUMBER OF MI ATTACK:									
First time	17	28	21	35	-	-	10.21	3.841	S
Second time	14	24	8	13	-	-			

df (1) NS – Not Significant, S-Significant

P < 0.05

Table 10: Showed that Chi square values were calculated to find out the association (table 10) between knowledge on practice regarding cardiac rehabilitation among myocardial infarction patients association with age (25.85), sex (6.86), marital status (9.05), religion(8.39),family monthly income(11.29) and number MI attack (10.216) were associated with knowledge on practice regarding cardiac rehabilitation among myocardial infarction patients. Other demographic variables (Sex, Educational Status, Occupation, Economic status, had no association with knowledge on practice regarding cardiac rehabilitation among myocardial infarction patients.

CHAPTER –V

DISCUSSION

This chapter presents the interpretation of the statistical findings. It has been discussed based on the objectives of the study.

The aim of the study was to assess effectiveness of structured teaching programme regarding cardiac rehabilitation in terms of knowledge, attitude and practice among patients with myocardial infarction at KMC hospital, Trichy. A sample of 60 patients with myocardial infarction who met the inclusion criteria were selected for the study by using purposive sampling method. After the pre test, structured teaching programme was given. Post test was done after seventh day of structured teaching programme.

These findings are discussed under the following headings.

- Assess the demographic variables.
- Assess the pretest knowledge, attitude and practice regarding cardiac rehabilitation among patients with myocardial infarction.
- Assess the posttest knowledge, attitude and practice regarding cardiac rehabilitation among patients with myocardial infarction

- Compare the pretest and posttest level of knowledge, attitude and practice regarding cardiac rehabilitation among patients with myocardial infarction
- Correlate the knowledge and practice regarding cardiac rehabilitation among patients with myocardial infarction.
- Find out the association between posttest levels of knowledge scores regarding cardiac rehabilitation among patients with myocardial infarction their selected demographic variables.
- Find out the association between posttest practice scores regarding cardiac rehabilitation among patients with myocardial infarction their selected demographic variables.

DESCRIPTION OF SAMPLE CHARACTERISTICS:-

The majority of myocardial patients were in the age group between 50-60 (41%) and 19(31%) patients were in the age group between 31-39 years. Highest number of patients with myocardial infarction 28(47) were males and 30(50%) were females. Most of the samples 45(75%) were married and 9(15%) were unmarried. The majority of the samples 21(35%) were studied up to primary school and 17(28%) were studied up to higher secondary. The majority of the samples 37(64%) had income less than Rs 2000/ and 22(37%) patients

had income between Rs 2001-Rs5000. Most of the samples 32(62%) were first attack and 23(38%) patients were second attack.

FIRST OBJECTIVE: - To assess the pretest level of knowledge, attitude and practice regarding cardiac rehabilitation among patients with myocardial infarction.

- Pretest knowledge regarding cardiac rehabilitation among 60 myocardial patients was assessed. The majority of samples had moderately adequate knowledge 28(47%), 26(43%) had inadequate knowledge and 6(10%) patients had adequate knowledge. It revealed that there was a need for structured teaching programme regarding cardiac rehabilitation among patients with myocardial patients.

This finding is consistent with the study conducted by Alika.(2006),on knowledge of patients on cardiac rehabilitation measures. The results of the study showed that 63.33% had inadequate knowledge, and 33.66% of participants had moderately adequate knowledge before structured teaching programme regarding cardiac rehabilitation.

- The majority of the samples had 33(55%) patients unfavorable attitude, 24(40%) patients were moderately favourable attitude , only 3(5%) patients were favourable attitude before implementing structured teaching programme with laptop with compact disc.
- The majority of the patients 24(40%) had inadequate practice, 31(52%) patients had moderately adequate practice. Only 5(8%) patients had adequate practice regarding cardiac rehabilitation

This results supported by Grace.J (2001) conducted a study on assessment of knowledge and practice regarding cardiac rehabilitation among post myocardial infarction patients, in MMC at Chennai.10% of patients were performed moderately adequate and 90% them were performed inadequate practice, none of them were possessed adequate practice .

SECOND OBJECTIVE:- To assess the posttest level of knowledge, attitude and practice regarding cardiac rehabilitation among patients with myocardial infarction.

- Post test knowledge regarding cardiac rehabilitation among patients with myocardial infarction was assessed. Regarding

knowledge 31(52%) had adequate knowledge, 29(48%) patients had moderately adequate knowledge and none of them had inadequate knowledge.

This finding is consistent with the study conducted by Alika.P. (2006), on knowledge of patients on cardiac rehabilitation measures. The study revealed that in the posttest 63.33% participants gained adequate knowledge, 36,6% of participants had moderately adequate knowledge and none of them had inadequate knowledge regarding cardiac rehabilitation.

The study supported by Egan.F , (2009) conducted study on Cardiac rehabilitation into the new millennium. Studies have demonstrated that patients' knowledge level increased following the implementation of a structured teaching programme, but this did not necessarily produce the changes required in lifestyle. Where behavioural changes have been observed, these are usually confined to one area, and is not sustained over time. The failure of current cardiac teaching programmes to elicit behavioural changes may be due to lack of individualized approach, and inappropriate timing of information. In addition, programmes often have not been structured to suit patients' individual needs. In-hospital education is essential for all cardiac

patients. This needs to be structured, systematic and easily adaptable to suit individual requirements.

- The majority of the patients 45(75%) had moderately favourable attitude, 15(25%) patients had favourable attitude myocardial infarction and none of them had unfavorable attitude regarding cardiac rehabilitation among patients with myocardial infarction in posttest.

This finding is consistent with the study conducted by Lakshmi.R. (1994) on knowledge, attitude and practice of myocardial infarction patients revealed that they had adequate knowledge only on few aspects. But they need to have knowledge on all aspects of myocardial infarction .This supports the need for importing education on prevention and complication of myocardial infarction. knowledge gain will help in reducing the clients expenditure on health care.

- The majority of the patients 32(53%) had moderately adequate practice, 28(47%) patients had adequate practice and none of them had inadequate practice in posttest.

This finding is consistent with the study conducted by Sheeba, (1997), on a study to determine the knowledge and practice of risk factors regarding coronary disease among 150 coronary disease patients in CMC, vellore. The study findings showed the majority of patients were found to be having adequate knowledge in relation to smoking and alcoholism (38.95%) medication regularly 37(92.5%) and come for follow-up 33(82%) ,23(57%) of the patients were adequately following the dietary restriction.

THIRD OBJECTIVE:- To compare the pretest and posttest level of knowledge, attitude and practice regarding cardiac rehabilitation among patients with myocardial infarction.

- The assessment of knowledge, attitude, practice scores of regarding cardiac rehabilitation among patients with myocardial infarction after structured had been increased as evidenced by posttest analysis. It was found that the mean, standard deviation and 't' value of posttest level of knowledge regarding cardiac rehabilitation among patients with myocardial infarction. Table (5) revealed that the level of knowledge of myocardial infarction patients were mean score of 16.2, SD 3.54 respectively and 't ' value is 12.074 in posttest which was increased compared to the

mean score of 10, SD 3.34 in the pretest at $p < 0.05$ level of significance.

Therefore the research H_1 ; The mean posttest knowledge scores is significantly higher than the mean pretest knowledge scores regarding cardiac rehabilitation among patients with myocardial infarction. Hence the hypothesis was accepted.

This finding is consistent with the study conducted by Uma.P (2000) on the effectiveness of structured teaching programme on life style modification of post myocardial infarction patients, at Chennai. The experimental group had improvement in knowledge on myocardial infarction (mean score was 54.24 with SD 11.06) improvement was found among the patient on life style modification. Mean score was 44.07 with SD 15.84. The paired 't' test value of overall score on the knowledge aspect was 26.21 shows highly significant after structured teaching programme.

- Table (6) revealed that the attitude regarding cardiac rehabilitation among patients with myocardial infarction in posttest had mean score of 28, (SD \pm 9.80) which was increased

compared to the mean score of 19.8, (SD \pm 7.05) in pretest at $p < 0.05$ level of significance.

Therefore the research H_2 ; The mean posttest attitude scores is significantly higher than the mean pretest attitude scores regarding cardiac rehabilitation among patients with myocardial infarction. Hence the hypothesis was accepted.

- Table (7) revealed that practice regarding cardiac rehabilitation among patients with myocardial infarction in posttest had mean score of, 6.3 (SD \pm 1.38) which was increased compared to the mean score of 4.2 (SD \pm 1.08) in pretest at $p < 0.05$ level of significance.

Therefore the research H_3 ; The mean posttest practice scores is significantly higher than the mean pretest practice scores regarding cardiac rehabilitation among patients with myocardial infarction. Hence the hypothesis was accepted.

FOURTH OBJECTIVE :- To correlate the knowledge and practice regarding cardiac rehabilitation among patients with myocardial infarction.

- Table (8) showed that there was a positive correlation ($r = 0.91$) between mean posttest knowledge and practice scores 16.2, SD=3.54 and M=6.3, SD=1.38. Further it could be inferred that knowledge and practice depends on each other. Therefore the research H₄ : there is significant relationship between the knowledge and practice regarding cardiac rehabilitation among patients with myocardial infarction. Hence the hypothesis was accepted.

FIFTH OBJECTIVE :- To find out the association between posttest level of knowledge regarding cardiac rehabilitation among patients with myocardial infarction and their selected demographic variables.

The data analysis showed that the knowledge regarding cardiac rehabilitation among patients with myocardial infarction had association with their demographic variables like age, sex, educational status, family monthly income, area of residence, and number of attacks, except marital status and occupation.

The study supported by Kanmani .J(2001) on effectiveness of planned cardiac rehabilitation intervention ,at cochin. The study revealed that there was significant association of the demographic

variables of age and education with pretest and posttest. The tendency among the educated people to read out the educational materials and their exposure to mass media could have been the reason for their increased knowledge.

Therefore the research H₅ : there is a significant association between posttest level of knowledge regarding cardiac rehabilitation among patients with myocardial infarction and their selected demographic variables. Hence the hypothesis was accepted.

SIXTH OBJECTIVE:- To find out the association between posttest practice regarding cardiac rehabilitation among patients with myocardial infarction and their selected demographic variables.

The findings of the study shows that the practice regarding cardiac rehabilitation among patients with myocardial infarction was associated with their demographic variables like age, sex, marital status , religion, family monthly income, area of residence, and number attack. Other demographic variables like sex, educational status, occupation, and economic status had no association.

Therefore the research H₅ : there is a significant association between posttest practice regarding cardiac rehabilitation among patients with myocardial infarction and their selected demographic variables. Hence the hypothesis was accepted.

CHAPTER-VI

SUMMARY, CONCLUSION, IMPLICATION, RECOMMENDATIONS AND LIMITATIONS

This chapter briefly presents the

Summary of the study

Conclusion

Implication

Recommendation

Limitation

SUMMARY OF THE STUDY:

The study was done to assess the effectiveness of structured teaching programme on knowledge, attitude and practice regarding cardiac rehabilitation among patients with myocardial infarction in KMC hospital at Trichy. The research design used for the study was pre experimental design. The research approach used for the study was evaluative approach which was conducted in KMC Hospital in Trichy. The conceptual framework based on the Wiedenbach's helping art of clinical nursing theory (1969). A sample of patients with myocardial infarction who met the inclusion criteria. The samples were selected for

the study using purposive sampling technique. The instruments used for data collection were structured interview schedule, five point Likert attitude scale and observational check list.

The investigator gave brief introduction and obtained oral consent from each participant prior to the study. After third day of admission the pretest was conducted by using the structured interview schedule, five point likert scale and observational check list for 30 minutes and the same day structured teaching programme given regarding cardiac rehabilitation for 45-50 minutes using laptop with compact disc. Posttest was conducted by using the same tool. Effectiveness of structured teaching programme was assessed by paired't' test. Karl Pearson test was used to find out the correlation between knowledge and practice among type patients with myocardial infarction. Chi-square test was used to find out the association the demographic variables with knowledge and practice regarding cardiac rehabilitation among patients with myocardial infarction. There was an improvement in knowledge, attitude and practice regarding cardiac rehabilitation among patients with myocardial infarction. Validity was done with suggestion of experts. Data analysis was done by using descriptive and inferential statistics.

MAJOR FINDINGS OF THE STUDY:

- Majority of patients 25 (41%) belong to the age of 50-60 years.
- Majority of patients 32 (53%) were males.
- Majority of patients 45 (75%) were married.
- Majority of patients 21 (35%) studied up to primary education.
- Majority of patients 20(33%) were self employed.
- Majority of patients 36 (60%) were belongs to Hindu religion.
- Majority of patients 37 (61%) had income less than RS . 2000.
- Majority of patients 38 (63%) were from rural area.
- Prior to implementation of structured teaching programme 26(43%) had inadequate knowledge, 28(47%) had moderately adequate knowledge and 6(10%) had adequate knowledge where as after implementation of structured teaching programme 31(52%) had adequate knowledge, 29(52%) patients had moderately adequate knowledge regarding cardiac rehabilitation among patients with myocardial infarction.
- Prior to implementation of structured teaching programme 33(55%) unfavorable attitude, 24(40%) patients had moderately favorable attitude and 3(5%) patients had favorable attitude where as after implementation of structured

teaching programme 45(75%) had moderately favorable attitude knowledge, 15(25%) patients had favorable attitude and non of them had unfavorable attitude regarding cardiac rehabilitation among patients with myocardial infarction.

- Prior to implementation of structured teaching programme 24(40%) had inadequate practice 31(52%) had moderately adequate practice and 5(8%) had adequate practice where as after implementation of structured teaching programme 32(53%) had moderately adequate practice, 28(47%) patients had adequate practice regarding cardiac rehabilitation among patients with myocardial infarction.
- High degree of positive correlation was found between posttest knowledge and posttest practice scores.
- There is significance association was found the posttest knowledge and practice regarding cardiac rehabilitation among patients with myocardial infarction with their selected demographic variables.

Finding showed that the structured teaching programme was effective in increasing the knowledge, attitude and practice regarding cardiac rehabilitation among patients with myocardial infarction. Thus structured teaching programme played an important role in improving the knowledge,

attitude and practice regarding cardiac rehabilitation among patients with myocardial infarction.

CONCLUSION :

Based on the findings of the study the following conclusion was drawn.

The existing knowledge regarding cardiac rehabilitation among patients with myocardial infarction was inadequate and moderately adequate. The existing attitude regarding cardiac rehabilitation among patients with myocardial infarction was unfavourable and moderately favourable attitude. The existing practice regarding cardiac rehabilitation among patients with myocardial infarction was inadequate practice and moderately adequate practice. The structured teaching programme significantly increased the knowledge ('t' value is 12.074), attitude ('t' value is 10.836) and practice ('t' value is 11.45) regarding cardiac rehabilitation among patients with myocardial infarction.

The study findings revealed that there was a significant improvement in the knowledge regarding cardiac rehabilitation among patients with myocardial infarction followed by structure teaching programme. Based on the statistical findings it is evident that provision

of such kind of structure teaching programme will motivate the myocardial infarction patients and help them to acquire knowledge, develop positive attitude and correct practice regarding cardiac rehabilitation among patients with myocardial infarction.

NURSING IMPLICATIONS

Implication for nursing service

- ❖ Nurse as educator, leader, counsellor, motivator, supervisor and team member in various situation of work.
- ❖ Health education may be given to myocardial infarction patients regarding meaning, phases, progressive physical activity, exercises, walking programme, counting pulse rate, safety measures to take medication, diet and resume normal activity.
- ❖ Health promotion is a vital function of the nurse and nurse can use this structured teaching programme on three levels of prevention (ie. Primary, Secondary and Tertiary)
- ❖ The result of the study will help the nurses to enlighten their knowledge on importance of health education.

Nursing education

- ❖ Students can utilize the structured teaching programme to give health education regarding cardiac rehabilitation among patients with myocardial infarction.
- ❖ The result can be used as an example by the tutor in the class rooms for giving importance to health education.
- ❖ Both the teacher and students can involve themselves in giving health education to patients and their relatives in the practical areas of nursing.

Nursing administration

- ❖ Nursing administrator can formulate policies that will includes all nursing staff to be actively involved in health education programme in their respective hospital and colleges.
- ❖ Nursing administrators can utilize the structured teaching programme while conducting in-service education programme for directing and motivating staff towards regarding cardiac rehabilitation among patients with myocardial infarction.
- ❖ Nurse administrators have more responsibility as supervisor on creating awareness regarding cardiac rehabilitation among patients with myocardial infarction by facilitating free distribution of booklets, handouts, charts regularly to patients in

and outpatient department of hospitals, health clinics in urban and rural.

Nursing research

- ❖ This study can be effectively utilized by the emerging researchers for their reference purpose.
- ❖ A similar study could be replicated by taking larger samples.

RECOMMENDATIONS

- ❖ An information booklet can be prepared as a teaching aid in the hospitals and out patient clinics.
- ❖ A similar study can be done with control group.
- ❖ A longitudinal study can be done using post test after one month, six months and one year to see retention of knowledge.
- ❖ A similar study can be done in urban and rural areas so findings can be compared.
- ❖ Similar study can be replicated on a large sample.
- ❖ Similar study can be replicated in outpatient department.
- ❖ A study can be done by involving all the cardiac patients, because the cardiac rehabilitation programme also helpful in cardiac surgery patients.

- ❖ A Comparative study can be conducted between two different teaching methods.
- ❖ A follow-up study can be conducted to evaluate the effective of planned rehabilitation among the myocardial infarction patient observing their practices at home.

LIMITATION

- ❖ It was more time consuming to interview the sample .It took 40-60 minutes for the investigator.

BIBLIOGRAPHY

BOOKS :

1. Basavanthappa B.T.,(2003). **“Medical and Surgical Nursing”**, (1st ed), New Delhi, Jaypee brothers medical publishers (P) Ltd,.
2. Black M. Joyce. Jane Hokanson Hawks et.al.,(2004). **“Medical Surgical Nursing Clinical Management for Positive Outcomes”**, (7thed), New Delhi, Elsevier India private ltd, Volume-I,
3. Burns Nancy and Susan K.Grove., (1993). **“The Practice Nursing Research Conduct Critique and Utilization”**, (1sted), Philadelphia, W.B. Saunders Company.
4. Edwards R.W. Christopher and Bouchier A.D. Ian (1991). **“Davidson’s Principles and Practice of Medicine”**, (16thed), Longman group, Hongkong,
5. Fawcet and Jacqueline., (1999), **“The Relationship of Theory and Research”**, (3rd ed), Philadelphia, F.A. Davis company, 203 – 208.
6. Gupta.S.G. Kapoor.V.K., (1990). **“Fundamentals of Mathematical Statistics”**, (1st ed), New Delhi, Sultard chand publications.

7. Gurumani N. (2005), "**An introduction to Biostatics**", 2nd edition, MJP publishers (P) Ltd, New Delhi, Page No: 211 – 213, 347 – 369.
8. Kothari.C.R., (2000). "**Research Methodology, Methods and Technique**", (2nd ed), New Delhi, Wiley Eastern limited.
9. Kusum Samant., (2002). "**Medical Surgical Nursing**", (2nded), India, Vora medical publications.
10. Linda S. Williams. et.al., (1999). "**Understanding Medical Surgical Nursing**", (1st ed), Philadelphia, F.A. Davis Company.
11. Prabhakara G.N. (2006). **Biostatistics**, 1st edition, Jaypee Brothers Medical publishers (P) Ltd., New Delhi, Page No: 39 – 53.
12. Sharma RK. (2009). "**Text book of Nutrition for B.Sc., Nursing**", (1st ed), Frontline Publications, Hyderabad, Page No: 100-104.
13. Smeltzer C.Suzanne and Bare G. Brenda (2004) "**Brunner and Suddarths Text Book of Medical and Surgical nursing**", (9th ed), Philadelphia, Lippincot Publication.
14. Lewis M.S., et.al., (2004). "**Medical Surgical Nursing**", Assessment and management of clinical problems, (7th ed), London, Mosby company.

15. Luckman et.al., (1994). **“Medical Surgical Nursing”**, (5th ed), Philadelphia, W.B. Saunders.
16. Munro B.H., (1997), **“Statistical Methods for Health Care Research”**, (3rd ed), Philadelphia, Lippincott company, 132 - 145.
17. Neelam Makhija., (2005). **“Introduction to Nursing Research”**, (1st ed), New Delhi, A.P.jain and co publications, 33 - 36.
18. Nabendu pal and sahadab sarkar., (2003) **“Statistics concepts and applications”**, (2nd ed), New Delhi, Prentice - Hall of India private ltd, , 176 - 180.
19. Wilma J.Phipps, et.al., (1996). **“Shafer’s Medical Surgical Nursing”**, (7th ed), New Delhi, BI Publications Pvt. Ltd, 511 - 525.
20. Paulette D.Rollant and Deborah.E.Ennis., (1996). **“Medical Surgical Nursing”**, (1st ed), U.S.A, mosby publications, 379 - 387.
21. Park K., (2005). **“Text book of Preventive and Social Medicine”**, (18th ed), Jabalpur, bandarsidan bhanot publisher.
22. Polit D.F., (2008). **“Introduction to Nursing research**, (8th ed), New Delhi, volters, J.B. lippincott publications.

23. Stephen R.Bloom, (2001), **“Toohey’s Medicine”**, (15th ed), New york, Churchill livingstone, 299 – 313.
24. Sundar Rao.P.S.S., (1999). **“An introduction to biostatistics”**, (3rd ed), New Delhi, Vora medical publications

JOURNALS :

1. Amirt dang, et.el., (2008)., **“Differences in risk factors and mortality, in young and old acute myocardial infarction in Goa”** Journal of clinical and diagnostic research, Volume : 2, 715-719.
2. Alike P., (2006).**“Knowledge of patients on cardiac rehabilitation measures”**, Nursing Nightingale Times,36-38
3. Carlsson R, et.al., (1997).**“Influence of coronary nursing management follow up on life style after acute myocardial infarction“**, Heart and education in heart”, Volume : 77, 256-259.
4. Paul Dubach , et.al.,(1989), **“cardiac rehabilitation for heart failure patients”**, International journal of cardiovascular medicine, Volume : 76, no.5
5. Barber.K., (2009) **“cardiac rehabilitation for community-based patients with myocardial infarction factors**

- predicting discharge recommendation**", Journal of clinical epidemiology, Volume : 54,1025-1030.
6. Carl .J,et.al., (2005), "**cardiac rehabilitation and preventive cardiology in elderly**", cardiology clinics, Volume : 17,233-242.
 7. Dubach.P., et.al., (1998)."**Optimal timing of phase II rehabilitation after myocardial infarction**", European heart Journal,35-37
 8. David .R, et.al.,(1997), "**cardiac rehabilitation services in England and Wales a national survey**", International journal of cardiology, Volume : 59,299-304.
 9. Egan F., (2006) ,"**cardiac rehabilitation into the new millennium**", Intensive and critical care nursing, Volume : 15,issue 3, 163-168.
 10. Raj esh Pandi.k ,(2004)."**Cardiovascular disease in India and impact of lifestyle and food habits**", Health care management, 1-6.
 11. Jenny Wingham et.al., (2006)."**listening to patients choice in cardiac rehabilitation**" ,European journal of cardiovascular nursing, Volume : 5,289-294.

12. Jonsdottir L.S. et.al., (1997), **“Incidence and prevalence of recognized and unrecognized myocardial infarction in women “**, European heart journal, Volume : 19, 1011-1018.
13. Lucy Wright, et.al., (1998), **“Factors affecting practice nurse involvement in follow up care of patients following myocardial infarction”**, Family practice , 15, 426-430.
14. Catherine, et.al.,(2002), **“cardiac rehabilitation improves the patients quality of life and risk factors profile through a multifactorial intervention“**, cardiac rehabilitation guidelines and recommendations,
15. Rastogi T, et.al., (2005) , **“Bidi and cigarette smoking and risk of acute myocardial infarction among males in urban India”**, Journal of BMJ , 14, 356-358.
16. Kaarveti R.L .,(1993), **“Effect of nutrition education,”** journal of American diet association, 660-667.
17. Ryszard N. et.al. (2008). **“ cardiac rehabilitation following myocardial infarction”**, Journal of cardiology, Volume : 15, 481-487
18. Mayou R.,et.al., (1991). **“Early rehabilitation after myocardial infarction”**, 1399-1402.
19. Lindsay C ,et.al., (1991). **Programmed instruction booklet for cardiac rehabilitation**, Heart lung,648-653.

20. M.R.Melville. W.S., et.al., (1999).” **socially deprived patients are less likely to attend but patients ineligible for thrombolysis are less likely to be invited**”, Department of cardiovascular medicine, Volume : 82,373-377.
21. W.S Leslie, et.al.,(2004). “**A transferable programme of nutritional counseling for rehabilitation following myocardial infarction**”, European journal of clinical nutrition, Volume : 5,778-786.
22. Thomas, et.al., (2006). “**A nurse led cardiac rehabilitation programme improves health behaviors and cardiac physiological risk parameters**”, cardiac nursing.
23. Sharon et.al.,(1994). “**Anxiety and self-care following myocardial infarction**”, Issues in mental health nursing, Volume : 15, 433-444.
24. Matta M., (1995). “**Education programme for cardiac patient**”. Asian Journal of cardiovascular nursing, 3,17.
25. Quinn T.,(2005). “**The role of nurses in improving emergency cardiac care,**” Journal of clinical nursing, Volume : 19,41-48.
26. Tanya et.al.,(2004), “**Exercise self-efficacy, habitual physical activity, and fear of falling in patients with coronary heart disease,**” Australian journal of advanced nursing ,volume14.

27. Sherry R, et.al., (2008). **"Referral to and discharge from cardiac rehabilitation"**, Journal of cardiovascular nursing, Volume.2
28. Gupta R. et.al., (1995). **"Prevalence of coronary heart disease and coronary risk factors in urban population of Rajasthan"**, Indian heart journal, Volume : 47,331-338.
29. Marie Johnson, et.al., (1999). **"Impact on patients and partners of inpatient and extended cardiac counseling and rehabilitation"**, Journal of psychosomatic medicine, 61, 225-233.

UNPUBLISHED THESIS:

- Kanmani J., (2001). **"Effectiveness of planned cardiac rehabilitation intervention among myocardial infarction patients in selected hospital"**, Cochin.
- Sheeba K. et.al., (1997). **"A study to determine knowledge and practice of risk factors regarding coronary artery disease patients,"** CMC, Vellor.
- Menaka S. et.al.,(1998). **"A study to assess the knowledge and practice in relation with self care activities to prepare a self instructional guide for patients with post myocardial ischemia"**, Chennai.

- Grace J., (2001). **“Assessment of knowledge and practice regarding cardiac rehabilitation among post myocardial infarction patients”**, Madaras Medical College research institute in Chennai.
- Uma P., (2000). **“A study to assess the effectiveness of a STP on life style modification of post myocardial infarction patients”**, Saveetha College of Nursing, in Chennai.
- Lakshmi R., (1994). **“A study to assess knowledge, attitude and practice in relation to self care activities among patient with Myocardial infarction”**, CMCH, Vellore.

NET REFERENCE

- <http://www.heartststs.org>
- <http://www..accn.net>
- <http://www.cardiac.reha>
- <http://www.cardiovascularnurse.com>
- <http://www.mv.myo.com>
- <http://www.patienteduc.couns>
- <http://www.escardio.org>
- <http://www.nhf.nz/>
- <http://www.upmc.com>.
- <http://www.americanheart.org.com>

APPENDIX - F

CARDIAC REHABILITATION

Topic	:	Cardiac Rehabilitation
Duration	:	45 Minutes
Group	:	Myocardial Infarction patients
Place	:	KMC Hospital
Method of teaching	:	Lecture
Medium of Instruction	:	Tamil
Teaching aids	:	Structured Teaching Programme

GENERAL OBJECTIVES :

At the end of the session the Myocardial infarction patients will acquire knowledge regarding cardiac rehabilitation desirable attitude and develop skill in practice on cardiac rehabilitation at home.

SPECIFIC OBJECTIVES




Myocardial infarction patients will be able to

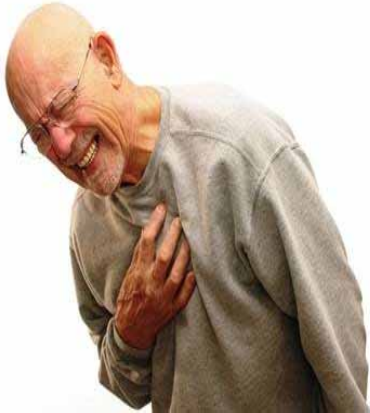

- Define Myocardial infarction
- List out the risk factor and causes of myocardial infarction
- Identify the clinical manifestation of myocardial infarction
- Discuss the management of myocardial infarction
- Define cardiac rehabilitation
- Identify goals and purposes of cardiac rehabilitation
- Explain the phases of cardiac rehabilitation
- Discuss progressive physical activity
- Discuss the various types of exercises
- Describe safety measures to be followed in medications
- Mention the dietary plan of patients with myocardial infarction
- Discuss how to prevent emotional stress
- Describe how to resume normal activities



Time	Contributory objectives	Content	A.V. aids	Teachers activity
		<p>Introduction</p> <p>Identification and management of coronary artery disease and cardiovascular risk is an important aspect of providing comprehensive medical care. The projections of increased mortality and increased life expectancy suggest that by the year 2000. Myocardial infarction is the leading cause of death in America and is responsible for an estimated 529,000 death each year. About 250,000 people a year die before they reach the hospital. 85 percent of people who die of all are 65 years of age or older.</p> <p style="text-align: right;">Joce M.Black(2005)</p> <p>The patient with myocardial infarction is usually male over 40, and has atherosclerosis of the coronary vessels, often in women and in younger men in their</p>		




Time	Contributory objectives	Content	A.V. aids	Teachers activity
		<p>early 30s or over 20s. Overall the rate of myocardial infarction is greater in men than in women at all ages.</p> <p>Brunner and Suddarth (2004)</p> <p>Myocardial infarction is a life threatening condition. The effect of Myocardial infarction is very critical. Cardiac rehabilitation measures can help nurses to develop strategies that help to identifying patients with cardiac risk factors and direct those to appropriate risk factors modification and help in assisting patients to take responsibility for life style factors that have an impact on coronary heart disease.</p>		lecture

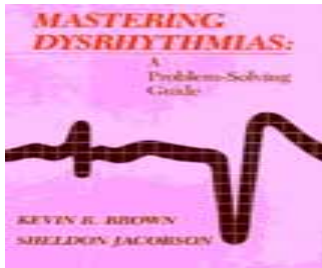
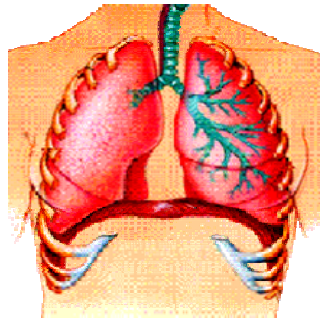
Time	Contributory objectives	Content	A.V. aids	Teachers activity
	Define myocardial infarction	<p>Definition:</p> <p>Myocardial infarction refers to the process by which myocardial tissue is destroyed in regions of the heart that are deprived of an adequate blood supply because of a reduced coronary blood flow.</p> <p style="text-align: right;">Brunner and Suddarth (2004)</p> <p>Myocardial infarction is a life threatening condition characterized by the formation of localized necrotic areas within the myocardium.</p> <p style="text-align: right;">Joyce M. Black (2005)</p> <p>Cardiac rehabilitation is the process by which patient with cardiac disease, in partnership with a multidisciplinary team of health professionals are encouraged and supported to achieve and maintain optimal physical and psychological health.</p> <p style="text-align: right;">Scottish intercollegiate guidelines</p>	Compact disc with laptop	lecture



Time	Contributory objectives	Content	A.V. aids	Teachers activity
	List out the risk factors and causes of myocardial infarction	<p>Risk factors for myocardial infarction</p> <ul style="list-style-type: none"> ❖ Positive family history (angina, stroke, previous heart attack) ❖ Increasing age (Men over 40 and women over 50 years) ❖ Gender – occurs three times more often in men than in women. ❖ High blood cholesterol ❖ Elevated blood pressure ❖ Cigarette smoking ❖ Elevated blood glucose level (diabetes mellitus) ❖ Obesity ❖ Physical inactivity Stress ❖ Personality traits such as highly competitive aggressive or ambition. <p style="text-align: right;">Joyce M. Black (2005)</p>	<p>Compact disc with laptop</p>   	lecture




Time	Contributory objectives	Content	A.V. Aids	Teachers activity
	Identify the clinical manifestation of myocardial infarction	<p>Causes</p> <ul style="list-style-type: none"> ❖ Coronary emboli – lesions of heart valves or thrombus in the left chambers of the heart. ❖ Trombotic coronary artery disease causes the blood to thicker and forms blood clots. ❖ Coronary vasospasm- cocaine or amphetamine abuse. ❖ Coronary vasculitis ❖ Trauma – damage to coronary arteries can occur when stabled or if exposed to radiation. ❖ Carbon monoxide poisoning – increase the heart muscles demand of oxygen. <p style="text-align: right;">Wilma J Phipps et. al. (1996)</p> <p>Clinical manifestation</p> <ul style="list-style-type: none"> ❖ Chest pain that occur suddenly and continuously ❖ Pain may radiate to the shoulders and down 	<p>Compact disc with laptop</p>  	lecture




Time	Contributory objectives	Content	A.V. aids	Teachers activity
		<p>the arms, usually to left arm.</p> <ul style="list-style-type: none"> ❖ Chest pain usually over the lower sternal region and the upper abdomen. ❖ In some patients pain may radiate to jaw and neck. ❖ Shortness of breath and difficulty breathing ❖ Pallor, diaphoresis, palpitation ❖ Dizziness or lightheadedness ❖ Nausea and vomiting <p>Brunner and Suddarth (2004)</p>	<p>Compact disc with laptop</p>  	lecture




Time	Contributory objectives	Content	A.V. aids	Teachers activity
	<p>Explain the diagnostic evaluation of myocardial infarction</p> <p>Discuss the management of myocardial infarction.</p>	<p>Diagnostic evaluation</p> <ul style="list-style-type: none"> ❖ History collection ❖ Physical examination ❖ ECG (Electrocardiography) ❖ Blood test ❖ Coronary angiography <p style="text-align: right;">Wilma J Phipps et. al. (1996)</p> <p>Management of myocardial infarction</p> <p>Medical management</p> <ul style="list-style-type: none"> ❖ Antiplatelet drugs (eg) Aspirin / clopidogrel <p>Surgical management</p> <p>Coronary surgical revascularizations of the medical management fails proceed the surgical management.</p> <ul style="list-style-type: none"> ❖ Open heart surgeries ❖ Closed heart surgeries ❖ Angioplasty – coronary angioplasty is a medical 	<p>Compact disc with laptop</p>   	lecture




Time	Contributory objectives	Content	A.V. aids	Teachers activity
	Enlist the complication of myocardial infarction.	<p>Procedure in which a balloon is used to open a blockage in coronary (heart) artery narrowed by atherosclerosis. It will improve blood flow to the heart.</p> <p>Complications of myocardial infarction</p> <ol style="list-style-type: none"> 1. Dysrhythmias – Tachycardia or regular beat all of which effect the ischemic myocardium. 2. Heart failure – pumping power of the heart has diminished. 3. Cardiac arrest – inadequate oxygen and nutrients are supplied to the tissue because of severe left ventricular failure. 4. Pericarditis – An inflammation of the visceral and partial pericardium. 5. Dressler syndrome – Characterized by pericarditis with effusion and fever that develops 	<p>Compact disc with laptop</p>  	lecture




Time	Contributory objectives	Content	A.V. aids	Teachers activity
	<p>Define cardiac rehabilitation</p> <p>Identify the purposes of cardiac rehabilitation</p>	<p>4 to 6 weeks after myocardial infarction.</p> <p>6.pulmonary – embolism:</p> <p>pulmonary edema (left ventricular failure) Edward R. W. (1991)</p> <p>Definition of cardiac rehabilitation</p> <p>Cardiac rehabilitation is the restoration of a person to an optimal state of function. The process of helping the patient adjust to a disability by teaching integration of all resources and concentrating more on existing abilities than on permanent disabilities</p> <p>Lewis M.S. et.al (2007)</p> <p>Cardiac rehabilitation is a multifactorial program that begins when the clients is still hospitalized and continue through out recovery.</p> <p>Purpose of cardiac rehabilitation</p> <p>Developing a program of progressive physical activity.</p>	<p>Compact disc with laptop</p>  	<p>lecture</p>



Time	Contributory objectives	Content	A.V. aids	Teachers activity
	Explain the phases of cardiac rehabilitation	<ul style="list-style-type: none"> ❖ Educating the client about cause, prevention and treatment of CHD. ❖ Lessening the exposure to risk factors ❖ Aiding the client in adjusting to changes in occupational goals. ❖ Improve the persons quality of life ❖ Patient return to a normal or near normal life style ❖ Educating the patient and family <p>Phases of cardiac rehabilitation</p> <p>Cardiac rehabilitation consists of four phases</p> <p>Phase I (acute illness), Phase II (less acute illness), Phase III Period of convalescence, Phase IV(Maintenance phase)</p> <p>Phase I (Period of acute illness) 3 to 5 days</p> <p>Begins as soon as the acute episode of illness occurs usually while the patient is still in the coronary care unit.</p> <p>Phase II (Less acute stage) 1 to 3 weeks</p> <p>Phase 2 occurs during the remainder of the hospitalization. The nurse can assist the patient toward</p>	<p>Compact disc with laptop</p>   	lecture


Time	Contributory objectives	Content	A.V. aids	Teachers activity
		<p>realizing the goal of independence even while on strict bed rest. This is achieved by directing the patients thinking towards the time when she or she will be active again.</p> <p>Phase III (Period of convalescence) (3 to 8 weeks)</p> <p>Phase 3 begins with the patients discharge to home and continuous throughout the convalescent period.</p> <p>To continue to restore the patient to activity levels that allow the return to work or the resumption of those activities performed before the illness occurred. Focus on long term conditioning and on maintaining cardiovascular stability. The patient is usually very self directed during this phase and does not require a accomplishments of the previous phase.</p> <p>Phases 4 (maintenance phase)</p> <p>Focus on long term conditioning and on maintaining cardiovascular stability. The patient is usually very self directed during this phases and does not require a accomplishments of the previous phase.</p>	<p>Compact disc with laptop</p>   	


Time	Contributory objectives	Content	A.V. aids	Teachers activity
	Discuss progressive physical activity	<p>Progressive physical activity: A progressive physical activity programme is initiated only when the patient's vital signs have stabilized and as assessed by the physician.</p> <ul style="list-style-type: none"> ❖ Progressive physical activity should be balanced with a period of rest in between the activity. ❖ The patient should be under expert supervision when over a new activity is initiated. ❖ All patients in their acute illness should perform their daily activities under the supervision. ❖ Patient should be adequately instructed when to report, how to call for help, if needed. ❖ Instruct the patient to call for help and to take rest by lying down whenever he feels faint or his heart beats too fast or too slow. 	<p>Compact disc with laptop</p>   	lecture


Time	Contributory objectives	Content	A.V. aids	Teachers activity
		<ul style="list-style-type: none"> ❖ Patient should wear comfortable dress. ❖ Avoid taking baths and showers immediately after the activity. <p>Phase I – (Period of acute illness)</p> <p>1st Step:</p> <ul style="list-style-type: none"> • Orientate the patient to the time, place and person <ul style="list-style-type: none"> ❖ Keep a calendar in the unit ❖ Make arrangements for the patient to hear the ringing of an alarm clock to know the timings. ❖ Let the patient see the outside of his unit through the open window. • Ask the patient to take complete bed rest. 	<p>Compact disc with laptop</p>   	lecture



Time	Contributory objectives	Content	A.V. aids	Teachers activity
		<ul style="list-style-type: none"> • Provide a fowler's position – this position will be helpful for the patient to help himself for feeding washing. • Ensure good sleep with less disturbances to the patient. After every 2 hours help the patient to change the position. • Passive exercise to the upper and lower limbs <ul style="list-style-type: none"> ❖ Shoulder and elbow flexion and extension ❖ Foot rotation <p>2nd Step:</p> <ul style="list-style-type: none"> • Help the patient to perform his morning care. • Help the patient to sit up as in fowlers' position. • Help him to brush his teeth, wash his face and hands. • Continue all those activities. • Encourage deep breathing and coughing exercises. 	  	lecture


Time	Contributory objectives	Content	A.V. aids	Teachers activity
		<p>3rd Step:</p> <ul style="list-style-type: none"> • Make the patient to sit on a chair next to the bed while making his bed. • Use a bed side commode for bowel movement. • Patient may exercise his arms and legs by himself. <p>4th Step</p> <ul style="list-style-type: none"> • Allow his to sit in bed as long as he wishes with support. Instruct him to lie down whenever he feels tired or call for help if he feels dizzy. <p>5th Step</p> <ul style="list-style-type: none"> • All the activities as done previously. • Allow him to work once around his bed. Instruct him to walk slowly. • Ask the patient to have active exercise of the hands and legs for 10 minutes, three times a day. 	<p>Compact disc with laptop</p>  	lecture




Time	Contributory objectives	Content	A.V. aids	Teachers activity
		<p>Phase II (Period of less acute stage)</p> <p>6th step</p> <ul style="list-style-type: none"> • May use the bathroom in his own room and attend to the toilet himself. Instruct him not to bolt to room from inside. <p>7th step</p> <ul style="list-style-type: none"> • Teach the patient warm up exercises (standing position) <ul style="list-style-type: none"> ❖ Rotate the arms – 10 times ❖ Raise the body on toes with back supported against a wall – 5 times ❖ leg adduction and abduction – 5 times • May walk up to a distance of 20 to 30 feet • Stop the exercise with a cool down phase 	<p>Compact disc with laptop</p> 	lecture




Time	Contributory objectives	Content	A.V. aids	Teachers activity
		<p>8th Step</p> <ul style="list-style-type: none"> • Under supervision, the patient may have a bath in his bathroom. • After a period of sufficient rest, allow the patient to walk 30 to 50 feet. • Continue the warm up exercise before walking and a cool down phase at the end of exercises. <p>9th step</p> <p>Teach the patient about warm up exercises.</p> <ul style="list-style-type: none"> ❖ Trunk twisting with hands on hips. ❖ Lateral side bending with hands on hips. <p>10th Step</p> <ul style="list-style-type: none"> • May walk up to 100 – 150 feet <p>11th Step</p> <ul style="list-style-type: none"> • Let the patient continue his daily activities as before. • Continue all the other warm up exercises. 	<p>Compact disc with laptop</p> 	<p>lecture</p>




Time	Contributory objectives	Content	A.V. aids	Teachers activity
		<ul style="list-style-type: none"> Encourages the patient to walk up to 200 feet (20 steps) <p>12th Step</p> <ul style="list-style-type: none"> Help him to walk down slowly and flights of stairs with a rest period after every 5 steps. Do not allow him to climb up the steps <p>13th Step</p> <ul style="list-style-type: none"> Encourage him to do warm up exercises. <p>14th Step</p> <ul style="list-style-type: none"> Encourage the patient to attend all his daily activities including warm up exercises when he is rested take him to the stairs, ask him to walk down and flights and climb up and down 10 steps with a resting period after every one to two steps. <p>Brunner and Suddarth (2004)</p>	<p>Compact disc with laptop</p> 	lecture



Time	Contributory objectives	Content	A.V. aids	Teachers activity
	Discuss the various type of exercises in cardiac rehabilitation	<p>Types of Exercise:</p> <p>Three types of muscular contraction exercises can apply safety to cardiac patients.</p> <ul style="list-style-type: none"> • Isometric exercises (static) • Isotonic (dynamic) • Resistive (a combination of isometric and isotonic). <p style="text-align: right;">Lewis M.S. et.al (2007)</p> <p>Isometric exercise :</p> <p>Static activities involve the development of tension during muscular contraction but produce little or no change in muscle length or joint movement.</p> <p>(Example)</p> <ul style="list-style-type: none"> ❖ Hand grip ❖ Lifting ❖ Carrying ❖ Pushing heavy objects 	<p>Compact disc with laptop</p>  	Lecture





Time	Contributory objectives	Content	A.V. aids	Teachers activity
		<p>Benefits of isometric exercises:</p> <ul style="list-style-type: none"> ❖ Aids in building muscle strength mean while burning excess fat. ❖ Slow muscle erosion and enhances the tone and shape of muscle. ❖ Help to improve bone density. ❖ To improve digestion. <p>Isotonic exercises :</p> <p>Isotonic activities involve changes in Muscle length and joint movement with rhythmic counteractions at relatively low muscular tension.</p> <p>(Example)</p> <ul style="list-style-type: none"> ❖ Leisure time activities (Sports) <p>Benefits of isotonic exercises:</p> <ul style="list-style-type: none"> ❖ Relatively inexpensive. <p>Ability to exercise to all major muscle groups.</p>		



Time	Contributory objectives	Content	A.V. aids	Teachers activity
		<p>III. Resistive exercises :</p> <p>Combines both isometric and isotonic exercises by using muscular contraction with movements as in free weight lifting.</p> <p>Aerobic exercises :</p> <p>Brisk physical activity that requires the heart and lungs to work harder to meet the body's increased oxygen demand. Aerobic exercise promotes the circulation of oxygen through the blood.</p> <p style="text-align: right;">Charles K. et.al (2003)</p> <p>❖ Running, Swimming, and cycling, long jumps.</p> <p>Benefits of aerobic :</p> <p>Physical Benefits :</p> <p>❖ Increase aerobic ability</p> <p>❖ Increase lung volume and lungs ability to take in oxygen.</p>	<p>Compact disc</p>   	lecture



Time	Contributory objectives	Content	A.V. aids	Teachers activity
		<ul style="list-style-type: none"> ❖ Reduces the demands on heart. ❖ Lowers blood pressure. ❖ Can reduce proportion of body fat. <p>Mental benefits :</p> <ul style="list-style-type: none"> ❖ Reduces anxiety ❖ Helps to improve mood – Self esteem and self concept. <p>Flexibility exercises :</p> <p>Stretching relaxes the mind and tunes up. An increase of flexibility such as improvement in over all balance, stability and mobility.</p> <ul style="list-style-type: none"> ❖ It also promotes circulation, increases the level of relaxation and just feels good. <p>A lack of flexibility is often associated with poor posture and low back pain.</p>	 <p>Compact disc with laptop</p>  	lecture





Time	Contributory objectives	Content	A.V. aids	Teachers activity
		<p>❖ Stretch in a slow, controlled manner and continue to (example)</p> <p>Guidelines:</p> <ul style="list-style-type: none"> ❖ Frequency – Do stretching exercises at least 3 days a week. ❖ Intensity – Stretch to a position of mild discomfort ❖ Duration – Hold each stretch 10 to 30 seconds. ❖ Type -control without resistance. <p>Warm up and cool down :</p> <p>Mild stretching for 3 to 5 minute before the physical activity and 5 minutes after the activity is important. Activity should not be started or stopped abruptly. This will help helps gradually prepare for and recover from exercises and avoid pushing heart down too hard.</p> <p>A good warm up and cool down consist of very light activity.</p>	  	lecture


Time	Contributory objectives	Content	A.V. aids	Teachers activity
		<p>Example</p> <ul style="list-style-type: none"> ❖ Slow walking or cycling followed by stretching. Stretching legs and hands rapidly. <p>General guidelines :</p> <ul style="list-style-type: none"> ❖ Breathe naturally do not hold breath ❖ Exercises should be slowly and smoothly ❖ Do each exercises 5 to 10 times unless in structured. ❖ Always warm up and cool down. ❖ Wear loose, comfortable clothes and shoos that fir properly. ❖ Exercise performs inside only. ❖ Fatigue occurs while doing exercise the lie down immediately. <p>Neck stretch :</p> <p>Bend your neck forward brining your chin toward your.</p>	<p>Compact disc with laptop</p>  	lecture


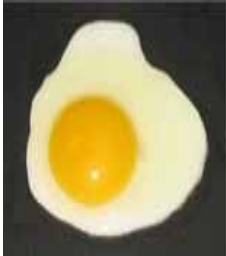
Time	Contributory objectives	Content	A.V. aids	Teachers activity
		<p>Leg extension :</p> <p>Lift one leg at a time, keeping it straight, until the leg is off the chair. Hold for 10 to 15 seconds, and then repeat with the other leg.</p> <p>Straight arm raise :</p> <p>Extend both arms out in front of you with palms facing down. Raise each arm above eye level, alternating one at a time.</p> <p>Heel raises :</p> <p>Use a chair or wall for support. Stand with your feet apart at shoulder width. Push your heels off the floor, and balance your weight on the balls of your feet. Return to resting position repeat 5 to 10 times.</p> <p>Calf and ankle strength :</p> <p>Face a wall, and have your feet facing forward. Place</p> <p>once</p>	   	lecture





Time	Contributory objectives	Content	A.V. aids	Teachers activity
		<p>feet in front of the others as shown. Bend your front knee while keeping both heels firmly on the floor. Gently lean in toward the wall. Hold the stretch for 10 to 18 seconds. Repeat with the opposite leg.</p> <p>Walking programe :</p> <ul style="list-style-type: none"> ❖ To start an exercise period warm up, slowly first. ❖ If the exercise period is to longer than 10 minutes slowly for the first 5 minutes. ❖ After your warm up you way work at a faster pace. ❖ Be sure the pace is comfortable for you. ❖ You should be able to talk with some one while you walk <p>For the first few weeks, walk every day when your can progress to 15 to 20 minutes of exercise you need to walk only 3 to 5 days a week.</p> <ul style="list-style-type: none"> ❖ You may walk daily if you wish. 	<p>Compact disc with laptop</p>  	lecture




Time	Contributory objectives	Content	A.V. aids	Teachers activity
	Discuss the safety measures to be followed in medication	<p>Counting pulse rate :</p> <p>Learning to count your pulse rate is simple and this still can be learned quickly with a little the pad of two or three fingers of the opposite hand. A light but firm pressure will allow you to feel it well.</p> <ul style="list-style-type: none"> ❖ The number of pulse per minute is pulse rate. ❖ It has to be counted at least 30 seconds. ❖ Normal pulse rate in adults is 72 per minute. ❖ Pulse rate is increased using exercise. ❖ Count the numbers of beats you feel into seconds and multiply that number by 6. <p>SAFETY MEASURES TO BE FOLLOWED IN MEDICATIONS</p> <p>Your medicine is powerful drugs. It is important to know the right way to use them.</p>	<p>Compact disc with laptop</p>  	lecture






Time	Contributory objectives	Content	A.V. aids	Teachers activity
		<ul style="list-style-type: none"> • Learn the correct way to take your medicine • Always take your medicine as prescribed • Take medication after food. • Store it in a safe place. • Make habits of taking your medicine at the same time each day. • Keep your medicine in the original containers you will not confuse them. • Store your medicine properly in the place that is dark cool and dry high heat and moisture may effect how well a medicine can work. • Keep all medicine out of the reach of the children. • Do not chew crush break any capsules. 	<p>Compact disc with laptop</p>    	lecture




Time	Contributory objectives	Content	A.V. aids	Teachers activity												
	Mention the dietary plan of patients with myocardial infarction	<ul style="list-style-type: none">• Don't omit the dose if medicine is not available.• Don't take medicine in the dark you may take any wrong medicine.• Don't wait until your last dose.• Don't stop taking your medicine without your doctor's approval.• Don't take an over the counter the medicine without your doctor's approval. <p>Dietary plan :</p> <p>Total daily calories :</p> <table><tr><td>Total fat</td><td>- 25% - 35%</td></tr><tr><td>Carbohydrate</td><td>- 50% - 60%</td></tr><tr><td>Protein</td><td>- 15%</td></tr><tr><td>Cholesterol</td><td>- < 200mg</td></tr><tr><td>Sodium</td><td>- <240 mg</td></tr><tr><td>Dietary fiber</td><td>- 20 - 30 gm</td></tr></table> <p style="text-align: right;">Indrani T.K. (2003)</p>	Total fat	- 25% - 35%	Carbohydrate	- 50% - 60%	Protein	- 15%	Cholesterol	- < 200mg	Sodium	- <240 mg	Dietary fiber	- 20 - 30 gm	Compact disc with laptop 	lecture
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Time	Contributory objectives	Content	A.V. aids	Teachers activity
		<p>Foods to be Avoided :</p> <p>Cholesterol :</p> <p>Cholesterol is important o help body function but is needed only in small amounts. Too much cholesterol in your body cause heart diseases.</p> <p>Saturated fat :</p> <p>Saturated fats tend to raise total cholesterol and LDL cholesterol level. The American heart association recommends that structured fatty acids intake should be 8 to 10 percent of calories.</p> <ul style="list-style-type: none"> ❖ Poly unsaturated fatty acid intake should by up to 10 percent of calories. ❖ Monounsaturated fatty acids make up the rest of the total intake about 10 to 15 percent of total. <p style="text-align: right;">Rekashsharma J. (1999)</p>	<p>Compact disc with laptop</p>  	




Time	Contributory objectives	Content	A.V. aids	Teachers activity
		<p>Unsaturated fat :</p> <p>Unsaturated fat tend to be liquid at room temperature. Unsaturated fat do not raise cholesterol it lower the blood cholesterol by lowering LDL.</p> <ul style="list-style-type: none"> ❖ Any fats that you do eat should be unstructured ❖ Cut out fast foods – Meats, egg yolks, butter and whole milk. ❖ Limit saturated fat cholesterol, try to choose <ul style="list-style-type: none"> ❖ Lean meats and ❖ Fish vegetables, beans and nuts ❖ Low fat dairy products ❖ Polyunsaturated or Monounsaturated fats, like canola and olive oils. <p>Low fat, low in refined carbohydrate and sugars:</p> <ul style="list-style-type: none"> ❖ Avoid all refined carbohydrate sugar, juice, jam, honey, chocolate, potato, , white bread, biscuits, noodles, ❖ Avoid fried foods-samosa, puris. 	<p>Compact disc with laptop</p>    	




Time	Contributory objectives	Content	A.V. aids	Teachers activity
		<ul style="list-style-type: none"> ❖ Avoid all aerated drinks and alcohol except plain soda. ❖ Avoid whole milk and use skimmed milk. ❖ Avoid the use processed cheese. ❖ Avoid all dry fruits & nuts. ❖ Use whole grain cereals whole grams and pulses. ❖ Use white meat – fish and chicken <p>Limit a amount of trans fat : Trans fat raises the levels of LDL (bad) cholesterol and also lowers high density lipoprotein (HDL or Good) Cholesterol in the blood.</p> <p>Example : Cookies, crackers, Chips, Hydrogenated, Vegetable oils.</p> <p>Limit sodium intake : Limit salt intake should be no more than 2400 Milligrams per day.</p> <ul style="list-style-type: none"> ❖ Avoid adding salt in cooking or at the table ❖ Watch for hidden sodium in foods. 	  	



Time	Contributory objectives	Content	A.V. aids	Teachers activity
		<p><u>Limit High potassium diet:</u></p> <ul style="list-style-type: none"> ❖ Spinach, carrots, cabbage. Yam-450 Brinjal-200 Sem-1800 Fruits- Apricots-430 Cherries-320 Lemon-270 Mussami-490 Peaches-453 Mango-205 <p>Avoided :</p> <ul style="list-style-type: none"> ❖ Whole milk with fat curds. ❖ Condensed milk ❖ Cream and cheese ❖ Duck, goose pork, high fat content ❖ Coconut oil, ghee, butter, cream, vanaspathy <p style="text-align: right;">Indrani T.K. (2003)</p>	    	



Time	Contributory objectives	Content	A.V. aids	Teachers activity
		<p>Foods to be taken freely :</p> <p>(1) Fiber</p> <p>Fiber is part of the plant that is not digested.</p> <p>Soluble fibers:-</p> <ul style="list-style-type: none"> ❖ Helps to control blood cholesterol levels. <p>Good source :-</p> <p>Apples, Oats, dried beans, orange and broccoli.</p> <p>Insoluble fibers :</p> <ul style="list-style-type: none"> ❖ Absorbs Moisture and helps prevent constipation. <p>Good Source :</p> <p>Wheat bran, whole grains, vegetables,</p> <p>2) Omega – 3 Fatty acids :</p> <p>Omega – 3 fatty acids may lower total cholesterol and LDL cholesterol levels.</p> <p>Good Source :</p> <p>Fish, Fish oil, Salmon, tuna</p>	<p>Compact disc with Laptop</p>   	

Time	Contributory objectives	Content	A.V. aids	Teachers activity
		<p>(3) Protein :</p> <ul style="list-style-type: none"> ❖ Dhal, Cereals and whole grains, Fish and liver, Soy, Soy protein may help lower the cholesterol. ❖ It is available in the whole soybean farm, Soy Milk, and soy flour. <p>(4) Fruits and Vegetables :</p> <p>Eat a variety of fruit and vegetables servings every day.</p> <ul style="list-style-type: none"> ❖ Dark green leafy vegetables ❖ Yellow fruits and vegetables ❖ Orange, Line, Pineapple, Papaya, ❖ Spinach Berries ❖ Radish leaves, ❖ Amaranth leaves. <p>Daily weight :</p> <p>Weight your self at the same time each morning after urinate but before eat break fast use the same scale every day.</p>	<p>Compact disc with laptop</p>   	lecture

Time	Contributory objectives	Content	A.V. aids	Teachers activity
	Discuss how to prevent emotional stress	<ul style="list-style-type: none"> ❖ Keep a record of tour daily weight. ❖ Notify your doctor if you gain two pounds or more over night. <p>Prevention of Emotional Stress :</p> <p>Sign of depression:</p> <ul style="list-style-type: none"> ❖ Feeling sadness ❖ Lack of interest, significant weight loss or weight gain. ❖ Significant change in sleep pattern, Sleeplessness, Difficulty making decision though of death or suicide. ❖ You May start to feel isolated, do not share your feelings. ❖ Isolate from the family member. <p>Stress Management :</p> <p>Stress management may lower the risk of serious heart problems such as a heart attack learning to manage stress is often part of programs to help you make a positive change in your life style.</p>	<p>Compact disc with laptop</p>   	lecture

Time	Contributory objectives	Content	A.V. aids	Teachers activity
		<ul style="list-style-type: none"> ❖ To keep your family and friends around you during r recovery. ❖ Persons should be relax while stress ❖ Deep breathing can help you relax and gain control of your situation. ❖ Developing an interesting hobby that can form a good out let for tensions. ❖ Speed sometimes indoor and outdoors games. ❖ Develop the habit of relaxing through exercise such as taking a walk, playing a game, working and people that way be a source of stress. ❖ Find some time to spend for recreational activities with the family members, friends and social clubs. ❖ Practice meditation for 20 to 30 minutes daily. 	<p>Compact disc with laptop</p>   	lecture

Time	Contributory objectives	Content	A.V. aids	Teachers activity
	Describe how to resume normal activities	<p>Resume normal activity :</p> <ul style="list-style-type: none"> ❖ Avoid sudden strain on the heart any activity that put strain on the heart activities should be resumed gradually. ❖ Avoid taking heavy meals, eat small meals and frequently. ❖ Avoid over fatigue. ❖ Most people can return to work. ❖ If you have a very serious heart problem or your job includes heavy lifting or a great deal of stress you may want to contact vocational counselor. ❖ A job counselor can help you return to help you find training to start a new job. <p>After a period of convalescence of 8 to 12 weeks following a attack, all patients return to their normal work.</p>	<p>Compact disc with laptop</p>  	lecture

Time	Contributory objectives	Content	A.V. aids	Teachers activity
		<p>Resume a sex life :</p> <ul style="list-style-type: none"> ❖ Sharing your concern and fears about having sex is important for both partners. ❖ Both partners need to feel ready to restart an active sex life. ❖ It is safe to resume your sex life about 6 weeks after an uncomplicated heart attack. <p>Follow up care:</p> <p>The patient should have a regular physical check up as advised by the physician.</p> <ul style="list-style-type: none"> ❖ Advice the patient to come for medical check – up when ever he experiences any unusual signs and symptoms such as chest pain, dyspnoea, palpitation sweating or fainting attack. ❖ Patients should also be advised to take regularly the drugs prescribed by their physician. 	<p>Compact disc with</p>  	lecture

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- o fharry;kwWk; , j u mwpFwpfs;
- o , l J ntz ;l hpffps;mi w nraypgG.

, j a kW rli kgG :

FwpgGi u :

, j a kW rli kgG vdgJ xU vspi kahd kwWk; vsqj py;
Ghp;J nfhs\$ ba Ki w. , J Nehahspfs f;F xU KOi kahd>Kffpakhd
tho;TKi w kwWk; , j a NehapypUe;J ghJ fhj ;J fnfhs\$ k;KUj ;J t khFk;

edj kfs;:

- cl y;hj pahd edj kfs;
- kd hj pahd edj kfs;
- nj hopy;Ki wapy;edj kfs;

- rKj ha kj pgG rkkej ggl l

j d; md,whl tho,T rkkej ggl l nray,fS fF mLj j thfi s
rhhej pUggi j tPl j di dj j hNd nraJ nfhs;tj wF , kKi w
cj TfWJ.

Nehf,fqfs;:

- nj hl hrrpahf nraaf; \$ba nray,fi s gwwpa epfo,Tfi s
- cJahf,fFwJ.r kwWk; , j a j hf,fj j wFg; gpd; j qfi s
- ~~Nehahsp~~ a KdNdwwj j wF
- Neha,f,fhd fhuz pfi s Fi wggj wF cj TfWJ.
- kWGbAk;NehahspNti yf,F nry,tj wF cj TfWJ.
- , j a Nehahsp kwWk; mti u rhhej thfS fF kWrbi kgG gwwp
nj hpeJ nfhsS gadgLfWJ.

kWrbi kgG gFj pfs;:

gFj p: 1 (mj pfkhf ghj pgi l ej thfs; 3- 5 ehl fs)

Neha; ghj pf,fgg l j py; , UeJ> Nehahsp j tpu rpfpr; rg; ghptpy;
, Uf,Fk;ti u.

- Neuk> , l k> kwWk; MI ,fi s gwwp Nehahspi a nj hpa i tj j y;
- ehl ,fhl bi a Nehahspapd;mi wapy;i tj j y;
- kz pNahi ri a NehahspF cz u i tj j y;
- ntspgGw gFj pfi sg;ghhj j y;

- Nehahspi a KOi kahf Xant Lf;fr; nraj y;
- rhaej epi yapy; Nehahspi a gLf;f i tj ;J gy; J yf;Fj y; kwWk; Kfk; fOTj y; Nghdw nray;fi s nraa typAWj ;Jj y;
- vej tñ , i l A+Wk; , yyhky; Nehahspi a J}qf i t f;f Ntz ;Lk;
- xtnthU , uz ;L kz p Neu j j wF xUKi w , l k; khwWj y;
- kwwth;fs; cj tpAl d; nraaf; \$ ba cl wgapw;pi a Nkwnfhss
- NjyAWj ;Jj y; kwWk; kz pf;fl ;Lg; gFj pi a ti sj j y; kwWk; ghj j i j RwWj y; gapw;pi nraa typAWj j y;

, uz l hk; gb :

- fhi y Neu nray;fi s nraa Nehahsp;fS f;F cj Tj y;
- Nehahspi a rhøj epi yapy; rha;thf gLf;f i tj j y;
- gy;J yf;Fj y> Kfk; kwWk i f> fhy; fOj Ttj wF cj tp nraj y;
- nj hl hēJ mi dj ;J nray;fi sAk; nraj y;
- Moēj %rR kwWk; , Uky; gapw;pi nraj y;

%dwhk gb :

gLfi fi a rhpnraAk; nghOJ Nehahspi a nkJ thf ehw;fhypapy;
cl ;fhu i tj j y>

gFj p; 2 (Nyrhd ghj pgg i lej th;fs; 1-3 thuq;fs)

j Ptpu rpfpri rf;Fg; gpd; Nehahsp kUj ;Jtki dapy; , Uf;Fk; ehl;fs>
Nehahsp jhdhfNt kwwth;fspd; cj tpadwp nraaf;\$ba nray;fi s
cz u i tf;Fk; gFj p , uz lhtJ gbapd; %yk; Nehahsp Kd;dplUej
epi yf;F j pUkg cj TfpuJ .

gFj p : 3 (Nehahsp tpahj parypUe;J Fz k;ngWk;epi y)

Nehahsp kUj ;Jtki dapy;Ue;J nts;NaWj y; Kj y> tll by; , j a
kWrlui kgG fi l gpb;Fk; gFj p , ej gFj pad; %yk; Nehahsp Kd;dplUej
epi yf;F j pUkGj y; kwWk; , j a rkkej ggl l mi dj ;J gh;Nrhi d fS k; rk
epi yam; i tji y;F Kd;ehbj ;J bgi g gj pT nraa Ntz ;Lk;

- neQRtyp cly;typ kaf;fk> Nrhh;T> Fkl l y> thej p Vwgl l hy;
kUj ;Jti umZ f Ntz ;Lk;
- ei l gapwrpad;J}u msT kwWk; NtfKk;ehwgl mj pfhp;f Ntz ;Lk;
- gS J}f;Fj y; kwWk; mj pf vi l Ai l a nghUI;fi s j sSj y; Mfpa
nray;fi s j tpf;f Ntz ;Lk;

gFj p ehd;F : (guhkhpgG gFj p)

6 Kj y; 8 thuq;fS f;F gpd; Nehahsp Kd;dplUej epi yf;F j pUkGj y;
kwWk;mi dj ;J cl wgapwrpi a NkwnfhsSj y;

rlhd cly;hlj pahd nray;fs;:

rlhd cly;hlj pahd nray;fs; vd;gJ Nehahspad; ehbj ;J bgG> %rR
kwWk; cly; ntggepi y> , uj j nfhj pggpd; msT rf epi yapYk; i tff
cj Tk;nray;fs;MFk;

- rēhd cl wgapwrrp Nti yfs;nraj y;kwWk;Nti y nraAk;Neuj j pd;
 , i l apy;Xa;T vLf;Fk;Ki wi ar;rēgLj ;J fpwJ.
- nrtypahfspd;Nkwghhi tapd;%yk;j hd;Gj pa nrayfi s nj hl qf
- Nehahspfs;vgngghOUk;kUj ;J thfs;kwwthfi s cj tpf;F mZ f
Ntz ;Lk;vdW typAWj j ggLf pwJ.
- Nehahspapd;; j aj ;J bgG mj pfkhf , Uej hYk>nrayfS ffp i l apy;
Nrhh;T kwWk;kaf;fk;Vwgl ;l hy;cl dbahf Neu hf gLf;f Ntz ;Lk;
- NehahspnghWj j khd Mi l mz pa Ntz ;Lk;
- cl dbahf cl wgapwrrrpf;F gpd;Fspggi j j thf;f Ntz ;Lk;

cl wgapwrrp:

%dW ti fahd cl wgapwrrpi a , j a Nehahspfs;nraa Ntz ;Lk;
 , j d;%yk;cl y;j i rfs;py;khwwqfs;VwgLf pwJ.

(v.fh.) nghUI fi s i ffs;hy; , Wf gwwpf;nfhS j y;

gad;fs;:

- cl y;j i rfs;tYgngw mj pffnfhOgi gf;Fi wf;f cj Tf pwJ.
- vYkG j bki d mj pfhpf;f cj Tf pwJ.
- rēhd rfj pi a mj pfhpf;f pwJ.

Rthrj j j NkkgLj ;J k;cl wgapwrrp (VNuhgppf;cl wgapwrrp) :

RWRWgghd nrayfs; , j aj j pwF guhz thA msp;f;f pwJ. , j d;
%yk; , uj j Xl ;l k;rēhf;F f pwJ.

gad;fs;

- Nehahspapd;j pwi d mj pfhpf;fpwJ.
- Ei uabuy;mj pf msT gphz thA vLj ;J nfhss cj TfwpJ.
- , j a Nti yggS f;Fi wf;fpwJ.
- , uj j fnfhj pgi g Fi wf;fpwJ.
- , uj j fnfhOggpd;msi tf;Fi wf;fpwJ.
- j ddkgpfi fi a mj pfhpf;fpwJ.

el b>kl f;Fk; kwWk; ti sAk; gapwrp:

el b kl f;Fk; gapwrp ti sTj; j di ki a tYgngWfpwJ. cl y; kwWk; kdhj pahd mi kj p fpi l f;fpwJ.

- , uj j Xl l j i j ruh d epi yapy; i tf;fpwJ.
- Fi wej ti sTg; gapwrp apd; %yk; gpd; KJ F gFj p typ kwWk; j twhd cl y; thF VwgLk; thagG cssJ.
- nkJ thf kwWk; fl ;Lgghl hd Ki wapy; nraa Ntz ;Lk;
- , ej cl wgapwrp thuj j py; %dW ehl fs; nraa Ntz ;Lk;
- el b kl f;Fk; NghJ Fi wej msT f\l qfs; VwgLk;
- vej tgi j i l apd wp cl wgapwrp Nkwnfhss Ntz ;Lk;

Mukg epi y cl wgapwrp

nkJ thf 3-5 epkl k; el l Ntz ;Lk; XtnthU nrayfi s nraAk; Kd;Dk; gpd;Dk; vej tgi nrayfi sAk; cl dbahf j pBh; vd;W epWj j f;\$ l hJ.

(vLj ;J fhI ;L)- nkJ thd ei l ggawrpi f>fhyfi s el bkl f;Fj y;

Ki wfs;;

- vgnghOJ kNghy;%rR tpl Ntz ;Lk;
- nkJ thf> , j khd Ki wapy;cl wgapwrp nraa Ntz ;Lk;
- xt nthU cl wgapwrpi aAk;3-5 Ki w nraa Ntz ;Lk;
- j sh;thd kwWk;Vww ci l i a mz pa Ntz ;Lk;
- mi wapDs;cl wgapwrpi aAk;Nkwnfhss Ntz ;Lk;
- Nrhh;T Vwgl ;l hy;cl dbahf NeuhfggLj ;J nfhss Ntz ;Lk;

fOj ;J Neuhf;Fj y;/ el ;Lj y;gapwrp:

fOj i j Kd;dhy; ti sj ;J gpwF NkNy epkheJ> gp;d;dhy; nkJ thf ti sf;fyhk; gpwF tyggf;fk; fOj i j j ; j pUggTk> , l J Nj hi s Nehf;fp gpwF tyJ i f Nj hi s Nehf;fp xt nthU epi yi aAk; 5 nehbfs; nraa Ntz ;Lk;

fhy;fi s el Lj y;gapwrrp:

xU fhi yj ;J}ffp Neuhf i tffTk; fhy; ehwfhyppUe;J
cahej pUff Ntz ;Lk; 10-15 nehbfs;mttz z k; i tffyhk; mNj Nghy;
kwnwhU fhi y cahj j Tk;

Neuhf i fi a cahj ;J k;gapwrrp:

cssqi f fb;NehffpathW , uz ;Li ffi sAk;J}ffp fNo j hoj j Tk;
fz fS fF Nky;i fi aj ;J}ffTk;

ghj j i j cahj ;J k;gapwrrp :

fhi y j i uappUe;J cahj j Tk> Ji z fF ehwfhyi aNah myyJ
Rti uNah gpbj ;JfnfhssTk; fhi y cahj j p cl y; rkrruhffp epwf
Ntz ;Lk;

gpd,fhy;kwWk;fZ f,fhy;gapwrrp:

Rtwi w Nehffp epd,W xU Kl bffhi y kbffTk> kbj ;J epwfTk;
Kd,fhi y kbj ;J epwfTk; nkJ thf Rtwpp; rhaTk; el bai j 10-15
nehbfs;epWj j Tk;

ei l ggapwrrp

- nkJ thf MukgpfTk;
- ei l gapwrrp J}uk; 10 epkpl j j pwF Nky; , Uej hy; Kj y; 5 epkpl qfs;
nkJ thf el fffTk;
- cl i y mi kj pahffpaggpd; kŁ ;Lk; el fffyhk;
- el fFk;ghi j vej tğ , i l AW , yyhky; , Uff Ntz ;Lk;
- el fFkNghJ cl d; tUgthfS l d;Ngr Ntz ;Lk;

- rpy thuqfS f;F j pd Kk; 15-20 epkl qfs; gpwF > 3-5 ehl fS; el ej hy; NghJ khdJ .
- ebqfs; tpUkgpdhy; j pd Kk; ei l ggapwrp nraayhk;.

ei l gapwrpi a epWj j Ntz ba mwpFwpfs;:

- neQRtyp
- Fkl l y;
- %rRj ;j pz wy;
- mj pfggbahd Nrhh;T>j i yrRwwy>
- mj pfggbahd tpahi t.

, j aj ;J bgi g mstplJ y;:

Ntfkhf> vsqj hf vz z f;\$ ba Ki w> Rz ;L tpYl d; kww i fapy;
 , uz ;L myyJ %dW tpyfs; , Uej hy; NghJ k; nkJ thd , uj j mOj j k;
 cz uKbAk; epkl j j pwF 72 J bgGfs;

- cl wgapwrpad; NghJ ehbj ;J bgG mj pfhpFk;
- gj ;J nehbfS f;F vj j i d Ki w J bffpwJ vdgi j vz z p mj i d Mwhy; ngUffpf; nfhss Ntz ;Lk;

kUeJ cl nfhss k; NghJ fi l gpbff Ntz ba ghJ fhgG Ki wfs;:

- cqfs; kUei j rhpad Ki wapy; cgNahfpff nj hpeJ nfhss
- Ntz ;Lk; ghpeJ i uggl l kUeJ fs; kl ;Lk; rhggpl Ntz ;Lk;

- Fwpggpl j Neu j py; xtnthU ehS k; kUeJ fi sr; rhggpl Ntz jLk;
- kUeJ fi s mi tfspd; ngl bfs; kwWk; FLi tfs py; i tggj d; Kyk;
Foggqfi s j tphffTk;
- , UI jhd Fsphej caukhd> ntJntJgghd <uggj Kss , Ij j py;
kUeJ fi s i tff Ntz jLk;
- kUeJ fi s vgnghOJk; Foei j fs; i fapy; vLj j tpl hj thW i tff
- Ntz jLg ghpT nj hi yNgrvz fi s i tj j pUff Ntz jLk;
- , UI j i wapy; kUeJ fi s rhggpl ti j j tphff Ntz jLk;
- fi lrp kUeJ , UfFk; ti u fhj j pUff Ntz jhk;
- kUj j th; MNyhri dapdwp kUeJ rhggpl ti j epWj j Ntz jhk;
- kUj j thpd; ghpeJi uapdwp ntspary; khj j pi ufs; thqfp rhggpl
Ntz jhk;

cz T Ki wj j pl j k:

nfhOgG	-	25-35 rj tj k;
khTrrj j	-	15 rj tj k;
nfhOgGrj j	-	200 Fi wthf
Nrhbak;	-	240 kpyy Fi wthf
ehhrrj j	-	20-30 fpuhk;

j tphff Ntz ba cz T Ki wfs; nfhOgG :

nfhOgGrj j kpf Fi wej msT NghJ khdJ . mj pfggbahd nfhOgG
, j agghj pgG Vwgl thagGssJ .

- o Kl j l > fwþ KOgghy; ntz j z ffl b Nghdw cz TfnfhOgG
rj j j f; Fi wff Ntz ;Lk;
- o kb > fha;fwffs;
- o Fi wej ti fahd ghy; nghUI fs;
- o rh;fi u> [hk> gorrrhW> Nj d> rhfNyl > cUi sf;foq;F>gp] fl >
- o Elyj] ez i t j tþ;ff Ntz ;Lk;
- o KOgghy> ghyhi l ffl b> cyhej j pul i r kwWk; nfhl j l
ti ffi s j tþ;ff Ntz ;Lk;
- o rpg] ; Nghdw nehUf;FgnghUI fi s j tþ;ff Ntz ;Lk;

cgG :

xU ehi sf;F 2400 kþfþ msT cgG vLff Ntz ;Lk; Nki rapy; cgG
i tj j i y j tþ;ff Ntz ;Lk; cgG css cz Tg; nghUI fi s ghþNrhj þ j
thqf Ntz ;Lk;

nghl j hrpak;

- Gj pdh> Nful > KI j l Nfh] ;
- G+rz pf,fha;
- fj j hpf,fha;
- Nrhhggok;> vY kkpri r > khq,fha;

vLf,ff\$ ba cz TgnghUI ,fs;

ehhrrj j :

- , uj j nfhOggpd;msi t Fi wf,fpwJ.
- [luz k;nratj wF cj TfpwJ.
- kyrrpf,fyfi sj;j t,h,f,fpwJ.
- Mggps> XI:] > cyhej gbl:] > MuQR
- KO j hdpa gUgG ti fffi s cgNahf,f,f Ntz jLk;

xi kf,fh nfhOgGrrj j :

xi kf,fh nfhOgGrrj j nkhj j nfhOgGrrj j pd; msi t Fi wf,f
cj TfpwJ. v-fh : kb> kb,vz nz a;kw w fl y,tho;kb;ti ffs;

khTrrj j :

gUgG j hdpa ti ffs;nfhOgG rrj j j fFi wf,f cj TfpwJ.

goqfs; kwWk; fha,fwps;:

- gri rf;fha,fwps;
- kQrs; epw goqfs; kwWk; fha,fwps;
- MuQR> i gd hggps> ggghs;gok;
- Gj pdh Kssqf; kwWk; fil u ti ffs;

vi l ghj j y;:

j pdKk; xNu vi l msTNfhyp; xNu Neu j j py> rpWeh; fogj j gpd; fhi y
Neu cz tpwF Kd; rhpggh;ff Ntz ;Lk;

- j pdKk;vi l i a Fwpj j i tj j fnfhss Ntz ;Lk;
- cl y;vi l 2 gTz ;LfF Nkyhf , Uff Ntz ;Lk;

kd mOj j j pw;fhd mwpFwps;:

- ❖ fti yggLj y>Mh;tkpd; k>vi l Fi wj j y;
- ❖ cwf;fkpd; k>cwf;fk;rhptu , yyhky; , UggJ>KbT vLf;f
 , ayhi k>j dpi kahf , Uj j y;
- ❖ FLkg egh;fspl kpUe;J j d; j j pUj j y;

kd mOj j j pw;fhd rpfpr; r Ki w :

kd mOj j i j f; Fi wf;Fk; Ki wfi s fi l ggpboggj pd; %yk; , j a
rkkej ggl ; Neha;fi s j t;h;f;fyhk;

- ❖ kwwth;fS l d;cz hTfi sg;gf;htj d;%yk; kdfFoggj i j j t;h;f;f
KbAk; thoi fj j uj i j cahj j Tk;cj Tf;pwJ.

- ❖ %rR gapwrrp d; %yk; kd mOj j j i j Fi wf;fyhk;
- ❖ kww nghOJ Nghf;Fk; nray;fs py; <Lgl Nt z ;Lk;
- ❖ cs; kw\Wk; nts p muq;f tpi sahl ;Lfs py; gq;FngWj y;
- ❖ ei l gapwrrp tpi sahl j y> Nti y nraj y; %yk; Fi wf;fyhk;
- ❖ FLkg egh;fs; kw\Wk; ez gh;fS l d; Neu j i j nryt pl Nt z ;Lk;
- ❖ j pahdggapwrrpi a 20-30 epkpl qfs; Nkwnfhst; j d; %yk; kd mOj j j i j f; Fi wf;fyhk;

Kd d pUej epi yf;Fj ; j pUkGj y;:

- j pBh; , j aj ;J bgG mj pfkhFj y> vej ghj pgGk; , yyhky; mj phrrpi a rkhs j j y;
- mj pfggbahd Nrhh i t j t phj j y;
- %ri r eWj ;J j y; Nghd w nray;fi s j t phj j y;
- gapwrrp ngw\W MNyh rfh;fs pl k; MNyhri dapi d ngw\W gpd; Nti yf;F j pUkGj y;

fi l gpbff Nt z bai tfs;:

- ❖ kUj ;J thpd; MNyhri dggb mbf;fb cl wgh;Nrhh i d nra;J nfhs s
- ❖ Nt z ;Lk; cz h;Tfs; Vwgl l hy; kUj ;J ti u mZ f Nt z ;Lk;
(neQRty p %rRj j pz wy> gl gl gG t pahi t)
- ❖ kUj ;J thpd; MNyhri dggb mi dj ;J kUe;J fi sAk; j twhky; vLff Nt z ;Lk;

KbTi u:

, j a kWrbi kgG Kyk; Nehahspfspl k; Neha; VwgLtj wfhd
fhuz pfs> cl wgapwrp ei l gapwrp cz Tf; fl ;Lgghl ;L Ki wfs> Nehahsp
KdðpUej epi yf;F j pUkGj y; kwWk; , j a rkkej ggl ;l mi dj ;J
ghpNrhj i d fS k;rk epi yapy; i t f;f cj TfpwJ.

APPENDIX - G

SECTION-A DEMOGRAPHIC VARIABLES

[1]	Age	
	[a] 31 – 39 Years	<input type="text"/>
	[b] 40 – 49 Years	<input type="text"/>
	[c] 50 -60years	<input type="text"/>
[2]	Sex	
	[a] Male	<input type="text"/>
	[b] Female	<input type="text"/>
[3]	Marital status	
	[a] Married	<input type="text"/>
	[b] Unmarried	<input type="text"/>
	[c] Widow/widower	<input type="text"/>
	[d] Divorce	<input type="text"/>
[4]	Educational status	
	[a] No formal education	<input type="text"/>
	[b] Primary school	<input type="text"/>
	[c] High school	<input type="text"/>
	[d] Higher secondary	<input type="text"/>
	[e] Graduate	<input type="text"/>

[5]	Occupation	<input type="text"/>
[a]	Private employee	<input type="text"/>
[b]	Govt. employee	<input type="text"/>
[c]	Self employee	<input type="text"/>
[d]	Unemployed / House wife	<input type="text"/>
[e]	Coolie	<input type="text"/>
[6]	Religion	<input type="text"/>
[a]	Hindu	<input type="text"/>
[b]	Christian	<input type="text"/>
[c]	Muslim	<input type="text"/>
[d]	Others	<input type="text"/>
[7]	Family monthly income	<input type="text"/>
[a]	Less than Rs. 2000	<input type="text"/>
[b]	Rs. 2001 – Rs. 5000	<input type="text"/>
[b]	Rs. 5001 – Rs. 10,000	<input type="text"/>
[b]	Above Rs.10,000	<input type="text"/>
[8]	Area of residence	<input type="text"/>
[a]	Rural	<input type="text"/>
[b]	Urban	<input type="text"/>
[9]	Number of myocardial infarction attack	<input type="text"/>
[a]	First attack	<input type="text"/>
[b]	Second attack	<input type="text"/>

SECTION - B
STRUCTURED INTERVIEW SCHEDULE
KNOWLEDGE QUESTIONNAIRE REGARDING CARDIAC
REHABILITATION

1. What is meant by myocardial infarction?
 - a) Excess blood supply to the heart
 - b) Death of myocardial tissue**
 - c) Less blood supply to the heart
 - d) Excess deposit of fat in the heart ☐
2. What is the risk factor of myocardial infarction?
 - a) Obesity**
 - b) Low blood pressure
 - c) Jaundice
 - d) Pneumonia ☐
3. What are the signs and symptoms of myocardial infarction?
 - a) Blurring of vision
 - b) Breathlessness
 - c) Chest pain radiating to the left arm**
 - d) Abdominal pain ☐
4. What diagnostic test will be done to confirm myocardial infarction?
 - a) Physical examination
 - b) ECG**
 - c) Serum cholesterol
 - d) X - ray ☐
5. What is the complication of myocardial infarction?
 - a) Cardiac arrest**
 - b) Paralysis
 - c) Anemia
 - d) Pulmonary disease ☐

6. What is meant by cardiac rehabilitation?
- a) **Restoration of a person to an optimal state of functioning**
 - b) Regular physiotherapy
 - c) Cessation of smoking
 - d) Cessation of alcoholism ☐
7. What is the aim of cardiac rehabilitation?
- a) **Able to perform independent activities**
 - b) Dependent on others
 - c) Partially dependent on others
 - d) Maintain strict rest ☐
8. What are the activities to be done in less acute stage in cardiac rehabilitation?
- a) Perform all activities by self
 - b) **Perform activities with assistance**
 - c) Not performing activities
 - d) Can return to work ☐
9. When will you start the progressive physical activity?
- a) **From third day onwards**
 - b) From first day onwards
 - c) From second day onwards
 - d) After one week ☐
10. When does the heart muscle heal completely?
- a) By 4 weeks
 - b) **By 6 weeks**
 - c) By 1 week
 - d) By 2 weeks ☐

11. Which one of the following is not an advantage of exercise in cardiac rehabilitation?
- a) Strengthen the muscles
 - b) Less oxygen supply to the heart**
 - c) Increase the amount blood supply the heart
 - d) Improved oxygenation ☐
12. What is the example for muscle contraction exercise?
- a) Hand grip**
 - b) Indoor games
 - c) Walking
 - d) Swimming ☐
13. Which day onwards exercises may be performed?
- a) From fifth day onwards**
 - b) From seventh day onwards
 - c) From third day onwards
 - d) From ninth day onwards ☐
14. What do you mean by warm up exercises?
- a) Take deep breath
 - b) Stretching legs/hands rapidly**
 - c) Meditation
 - d) Yogasanas ☐
15. Which one of the following is not an example for aerobic exercises?
- a) Brisk walking
 - b) Stretching
 - c) Climbing steps
 - d) Long jumps** ☐

16. Which one of the following is not an indication to stop exercise?
- a) Chest pain
 - b) Giddiness
 - c) Extreme sweating
 - d) **Warm/ cold climate**
- ☐
17. How many minutes will you perform walking in a day?
- a) 1-5 minutes
 - b) 5-10 minutes
 - c) 10-15 minutes
 - d) **10-20 minutes**
- ☐
18. What will you do incase of fatigue while doing exercise?
- a) Inform physician
 - b) Sit in upright position
 - c) **Lie down flat**
 - d) Continue the activities
- ☐
19. What is the normal pulse rate?
- a) 50-60/minutes
 - b) **60-72/minutes**
 - c) 90-100/minutes
 - d) Above 100
- ☐
20. Which one of the following is not safe regarding medication?
- a) Take medication after food
 - b) **Omit the dose if medicine is not available**
 - c) Store in a safe place
 - d) Take as prescribed
- ☐

21. What are the food items to be avoided for maintaining good health after myocardial infarction?
- a) Fruits and vegetables
 - b) Salted and fried foods**
 - c) Cereals and whole grains ☐
 - d) Pulses and skimmed milk
22. How much salt to be taken per day?
- a) 2,300mg (half teaspoon)**
 - b) 4000mg (one teaspoon)
 - c) 6000mg (one and half teaspoon)
 - d) 8000mg (two teaspoon) ☐
23. Which type of food can be taken freely after myocardial infarction?
- a) Alcohol and soft drinks
 - b) Vegetables and fruits**
 - c) Sweets and salad
 - d) Fast food and baked foods ☐
24. Which one of the following will not help in reducing emotional stress?
- a) Share your feelings with others
 - b) Isolate from the family members**
 - c) Relaxation
 - d) Engage in activities ☐
25. When will you return to job?
- a) After 8 weeks**
 - b) After 2 weeks
 - c) After 3 months ☐
 - d) After 6 months

SECTION - C

STRUCTURED INTERVIEW SCHEDULE

ATTITUDE REGARDING CARDIAC REHABILITATION

(LIKERT SCALE)

S. No	Questions	Strongly Agree	Agree	Uncertain	Disagree	Strongly disagree
	<ul style="list-style-type: none"> • After myocardial infarction normal activities can be performed. ★ Cigarette smoking and physical inactivity are not risk factors for myocardial infarction. • Weight lifting will harm the patient. ★ Recording pulse rate is not a good habit. • Aerobic exercise lowers the blood pressure. ★ Going for work is not advisable after myocardial infarction. • Heavy meals is a risk factor for another attack ★ It is not necessary to continue cardiac drugs life long . • Dietary restriction to be continued life long. ★ Walking may be stopped after 3 months. 					

SECTION - D

STRUCTURED INTERVIEW SCHEDULE KNOWLEDGE ON PRACTICE

REGARDING CARDIAC REHABILITATION

(CHECK LIST)

S. No.	Content	Yes	No
1.	Do you perform self care activities independently?		
2.	Do you walk daily?		
3.	Do you have the practice of warm up before exercise?		
4.	Are you doing leg exercise while sitting?		
5.	Do you check the pulse rate?		
6.	Do you add more fibers in the diet?		
7.	Will you take fruits and vegetables daily?		
8.	Do you follow dietary restrictions as advised?		
9.	Do you have the practice of taking medication as prescribed?		
10.	Do you spend time in relaxation?		

Ra FwpgNgL

RafFwpgGfs;:

1. taJ

m. 20-30 tUI qfS;

M. 30-39 tUI qfS;

, . 40-49 tUI qfS;

< . 50-60 tUI qfS;

2. ghypdk;

m. Mz ;

M. ngz ;

3. j pUkz j Fj p

m. j pUkz khdt h;

M. j pUkz khfhj th;

, . fz ti d , oej th/ki dt pi a , oej th;

< t pthfuj j hdt h;

4. fy;tp j Fj p

m. gbffhj th;

M. Mukgf; fy;tp

, . cah; fy;tp

< . Nkyepi yf; fy;tp

c. gl j j hhp

5. nj hopy;

m. j dpahh; gz p

M. muRgz p

, . Raj nj hopy;

< . Nti y , yyhj th; / , yyj j urp

c. \$ yp

6. kj k;

m. , eJ

M. fpU] ;J th;

, . K] ypk;

<. kw\wth;

7. FLkg khj tUkhd k;

m. &gha; 2000 Fi wthf

M. &gha; 2001 - 5000

, . &gha; 5001 - 10000

<. &gha; 10000 Nky;

8. tL cSS gFj p

m. efuk;

M. fpuhkk;

9. vj j i d Ki w khui l gG te;J sS J

m. Kj y; Ki w khui l gG

M. , uz j hk; Ki w khui l gG

gFj p - M

ti uaWf;fggl i Neh;fhz y;mwTj j wd;ml i ti z :-

1. khui l gg vdwhy;vd;d?

m) , j aj j wF mj pfkhd , uj j XI i k;

M) , j a ci wapy; , wej , uj j j pRf;fs;

,) , j aj j wF Fi wej msT , uj j XI i k;

<) , j aj j py;mj pf msT nfhOgG gbj y;

☐

2. khui l ggpd;fhuz pfs;vd;d?

m) cl y;gUkd;

M) Fi wej , uj j mOj j k;

,) kQrs;fhkhi y

<) fgthj k;

☐

3. khui l ggpd;mwFwfs;vd;d?

m) kqfpa ghhi t

M) %rRj ;j pz wy;

,) neQR typ typ , l J i fGwkhf guTj y;

<) tapwW typ

☐

4. khui l ggG Nehi a vj d;%yk;cWj pnrat;ha?

m) cl y;KO ghNrhj i d

M) RUS;gl k;

,) , uj j j j py;nfhOggpd;msi t ghNrhj j j y;

<) kp d;fj ph;thRg;gl k;

☐

5. khui l ggpd;gpd;tpi sTfs;vd;d?

m) , j a mi l gG

M) gf;f thj k;

,) , uj j Nrhi f

☐

<) Ei uaŋy;rkgej ggl i Neha;

6. , Uj a kWŋŋi kgG vd,why;vdɔ?

m) KdɔpUej epi yf;F nfhz ;L tUj y;

M) nj hl hrrpahd Kl eŋ;F gaŋŋŋ

,) Gi fgŋbj j i y eŋWj ;J j y;

<) kJ mUe;J k;gof;fj i j eŋWj ;J j y;

☐

7. , Uj a kWŋŋi kgG gaŋŋŋpɔd;Nehf;fk;vdɔ?

m) j hdhfNt mi dj;J nray;fi s nray y;

M) gŋwi u rhhej nray;

,) Fi wej msT kŋwth;fi sr;rhhej nray;

<) fz bgghf Xa;T vLj j y;

☐

8. , Uj a kWŋŋi kggŋy; , uz i hk;gFj ŋŋy;css Nehahs;ŋs;

nraaf;\$ ba nray;ŋs;vdɔ?

m) j hdhfNt mi dj;j nray;fi s nray y;

M) kŋwth;ŋd;cj t;ŋAl d;nraaf;\$ ba nray;ŋs;

,) vej nrai yAk;nraahky; , UggJ

<) kWgbAk;Nt i yf;F nry;Yj y;

☐

9. rŋhd cl wgapŋŋŋ vgNghJ nj hl qf Nt z ;Lk?

m) %d,whk;ehs;ŋŋUe;J

M) Kj y;ehs;ŋŋUe;J

,) , uz i hk;ehs;ŋŋUe;J

<) xU thuj j ŋŋFs;

☐

10. vgnghOJ , Uj a j i rŋs;KOtJ khf Fz ki i Ak?

m) ehd;F thuj j ŋŋFs;

M) MW thuj j ŋŋFs;

,) xU thuj j ŋŋFs;

☐

<) , uz ;L thuj j wFs;

11. fb;fz ; twWs;vi t xdW , Uj a kWrl; kggpd;cl wgapwrrp myy?

m) j i rfi s tYthf;Fj y;

M) , j aj j wF Fi wej msT gūz thA nry;Yj y;

,) gūz thA mj pfhuj j y;

<) , j aj j wF mj pf msT , uj j Xl ;k;

☐

12. j i r RUq;Fk;gapwrrp;vLj ;J f;hl ;L vd;d?

m) nghUl ;fi s i f;shy; , Wf gwwpf;nfhsS j y;

M) cs;muqf tpi sahl ;L

,) ei l gapwrrp

<) e;ry;

☐

13. vej ehspypUe;J cl wgapwrrpi a Nkwnfhss Ntz ;Lk?

m) l e;J ehspypUe;J

M) VohtJ ehspypUe;J

,) %dwhTJ ehspypUe;J

<) xdgj htJ ehspypUe;J

☐

14. Mukg epi y cl wgapwrrp vd;why;vd;d?

m) Mokhf %rR , Oj j y;

M) i f kwWk;fhy;fi s Nt fkhf e; b kl f;Fj y;

,) j pahd gapwrrp

<) Nahfhrdk;

☐

15. fb;fz ; twWs;vi t xdW Rthrij j NkkgLj ;Jk;cl wgapwrrp

m) y;WRWgghd ei l

M) t;pt i l ar;nraj y;

,) khbggb VWj y;

☐

- <) eBk;j hz ;Lj y;
16. fb,f;fz ;l twWs;vi t xdW cl wgapw;pi a epWj ;J tj w;fh d mwpFwp
m) deQR typ
M) j i yRwWj y;
,) mj pfkhf t;ahj j y;
<) #l hd kwWk;Fspej gUt epi y ☐
17. cl wgapw;rpapd;NghJ Nrhh;T Vwgl ;l hy;vd;d nraa Nt z ;Lk?
m) kUj ;J thpl k; nj hpt;j j y;
M) Neuhf cl ;fhUj y;
,) cl dbahf Neuhf gLj j y;
<) nj hl h;eJ cl wgapw;rp nraj y; ☐
18. vt;tST epkpl k;ei l ggapw;rp Nkwnfhs;t ha?
m) xdwpypUe;J l e;J epkpl k;ti u
M) l ej pypUe;J gj ;J epkpl q;fs;ti u
,) gj j pypUe;J gj pi de;J epkpl q;fs;ti u
<) gj pi de;J pypUe;J , UgJ epkpl q;fs;ti u ☐
19. xU epkpl j j pwFs;ehbj ;J bggpd;rhpahd msT vd;d?
m) 50 - 60/ epkpl q;fs;
M) 60 - 72/ epkpl q;fs;
,) 90 - 100/ epkpl q;fs;
<) 100 Nky/ epkpl q;fs; ☐
20. fb,f;fz ;l twWs;vi t xdW kUe;J cl nfhs;S k;NghJ fi l gpbff
Nt z ba ghJ fhgG Ki wfs;myy?
m) cz T mUej paj pwFg;gpd;vLj j y;
M) kUe;J , yyhj fhyqfs;py;kUe;J cl nfhs;ti j j t;hj j y;
,) kUe;J fi s ghJ fhgghd , l j j py;i tj j y;
<) kUj ;J thpd;MNYhri dapd;gb cl nfhs;S j y; ☐

21. khui l ggwFggpd; MNuhffpakhd cl y; epi yf;F Nkwnfhss
Ntz ba cz T Ki wfs;vdd?
m) goqfs; kwWk; fha;fs;
M) cgG kwWk; vz nz apy; nghhj j cz T
,) j hdpaqfs; kwWk; Ki sf;fl ba j hdpaqfs;
<) gUgG kwWk; Mi l e;ffpa ghy;
22. xU ehi sf;F vt;tsT cgG cgNahf;f;f Ntz ;Lk?
m) 2400 kpyyp fpuhk; (mi u Nj f;fuz b)
M) 4000 kpyyp fpuhk; (xU Nj f;fuz b)
,) 6000 kpyyp fpuhk; (xd i w Nj f;fuz b)
<) 8000 kpyyp fpuhk; (, uz ;L Nj f;fuz b)
23. khui l ggwFggpd; vej ti fahd cz T nghUI fi s mj pfkhf
m) kfhk;wMk; E s;ghd qfs;
M) fha;fw;fs; kwWk; goqfs;
,) , dpgG kwWk; go fyi t
<) tpi uthf j ahhp;Fk; cz T kwWk; nuhl b ti ffs;
24. fb;ffz j twWs;vi t xd;W kdf; f;shrrp %ykhf VwggLk
, l hghLfi s Fi wf;f , ayhj i t vJ?
m) cz h;Tfi s kwwthpl k; ghpkhWj y;
M) FLkg egh;fspl kpUe;J j dpi kgLj j y;
,) Xa;T vLj j y;
<) nj hl he;J nrayfi s nraj y;
25. vgnghOJ Nti yf;F j pUkGtha?
m) vl ;L thuq;fS f;F gpwF
M) , uz ;L thuq;fS f;F gpwF
,) %d;W khj j j pw;F gpwF
<) MWkhj j j pw;F gpwF

gFj p - ,
kdggghd; k j p d; Ma;T Nfs;t pfs;

t. vz ;	Nfs;t p	cWj p ahf xj ;J f n f h s ;f p Nwd ;	xj ;J f n f h s ;f p Nwd ;	e p r r p a k y y	k W f f ;Nwd ;	cWj p ahf k W f f ;Nwd ;
1	khui l gg p w F g w F , ayghd nrayfi sr; nraayhk;					
2.	Gi fgg p b j j y ; k w W k ; N t i y n r a a h k y ; , UggJ khui l gg p d ; f h u z p f s ; m y y .					
3.	g S J } f ; F t J c s s p l l n r a y f s ; N e h a h s p i a g h j p f ; f f ; \$ L k ;					
4.	ehb J b g i g F w j ; J i t g g J x U e y y					
5.	R t a y j m y W k k g L j ; J k ; c l w g a p w r p , u j j m O j j j i j f ; F i w f F k ;					
6.	khui l gg p w F g w F N t i y f F n r y t J m w p T W j j g g l l j y y .					
7.	m j p f k h f c z T v L j ; J f ; n f h s ; t J khui l gg p d ; x U f h u z p					
8.	, U j a r k g e j g g l l k U e ; J f i s t h o e h s ; K O t J k ; c g N a h f p f f N t z l h k ; .					
9.	c z T g o f f t o f f q f i s t h o e h s ; K O t J k ; f i l g g p b f f N t z l k ;					
10.	M W k h j j j p w F g p d ; e i l g a p w r p i a e p W j j p t p l y h k ;					

gFj p - <

nray;t op mwpTj j pwi d mwptj w,fhd Neh,fhz y;

t. vz ;	nghUs;	Mk;	, yi y
1.	kwwth,fS; cj t p d w p j d p a h f j q f S f f h d Nti yfi sr; nraa Kbf p w j h?		
2.	j p d K k; ei l g g a p w r p n r a f p w h f s h?		
3.	c l w g a p w r p n r a t j w F K d; n r a A k; M u k g e p i y g; g a p w r p f i s n r a A k; g o f f k; c z j h?		
4.	e b f s; m k h e j p U f F k; N g h j y y h k; f h Y f S f f h d g a p w r p i a r; n r a t h f s h?		
5.	c q f S i l a c z t p y; e h h r r j j c s s c z T g n g h U i f i s N r h j j f; n f h s t h f s h?		
6.	j p d K k; g o q f s; k w W k; f h a f w p f i s v L j j f; n f h s t h f s h?		
7.	e h b j b g i g N r h j p g g h f s h?		
8.	m w p T W j j g g l j c z T f l j L g g h l j L K i w f i s g p b g g h f s h?		
9.	n f h L f f g g l j K i w f s p y; k U e j f i s v L j j f; n f h s S k; g o f f k; c z j h?		
10.	e b f s; X a t p w f h f N e u k; n r y t p L t h f s h?		

ANNEXURE – H

ANSWER KEY

PART –A

SCORES RELATED TO KNOWLEDGE REGARDING CARDIAC REHABILITATION AMONG PATIENT WITH MYOCARDIAL INFARCTION.

Serial No	A	B	C	D
1.	0	1	0	0
2.	1	0	0	0
3.	0	0	1	0
4.	0	1	0	0
5.	1	0	0	0
6.	1	0	0	0
7.	1	0	0	0
8.	0	1	0	0
9.	0	0	0	1
10.	0	1	0	0
11.	0	1	0	0
12.	1	0	0	0
13.	1	0	0	0
14.	0	1	0	0
15.	0	0	0	1
16.	0	0	0	1
17.	0	0	0	1
18.	0	0	1	0
19.	0	1	0	0
20.	0	1	0	0
21.	0	1	0	1
22.	1	0	0	0
23.	0	1	0	0
24.	0	1	0	0
25.	1	0	0	0
26.	1	0	0	0
27.	1	0	0	0
28.	0	1	0	0
29.	0	1	0	0
30.	1	0	0	0

Total Score : 30

Right answer : '1'

Wrong answer : '0'

PART – B

SCORES RELATED TO ATTITUDE REGARDING CARDIAC REHABILITATION AMONG PATIENT WITH MYOCARDIAL INFARCTION.

Serial No	Agree	Strongly Agree	Uncertain	Dis agree	Strongly disagree
1	5	4	3	2	1
2	1	2	3	4	5
3	5	4	3	2	1
4	1	2	3	4	5
5	5	4	3	2	1
6	1	2	3	4	5
7	5	4	3	2	1
8	1	2	3	4	5
9	5	4	3	2	1
10	1	2	3	4	5

PART – C

SCORES RELATED TO PRACTICE REGARDING CARDIAC REHABILITATION AMONG PATIENT WITH MYOCARDIAL INFARCTION.

Serial No	Yes	No
1.	1	0
2.	0	1
3.	1	0
4.	0	1
5.	1	0
6.	0	1
7.	1	0
8.	0	1
9.	1	0
10.	0	1

Total Score : 10

Right answer : '1'

Wrong answer : '0'